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Vol. VII

of the

Botanists Repository

Comprising,

Colour'd Engravings

of

New and Rare Plants

ONLY

With Botanical Descriptions &c.

in

Latin and English,

after the

Linnæan System

by

H. Andrews

Botanical Painter Engraver &c.

Mo. Bot. Garden
1904.

PLATE CCCCXXXVIII.

AGAVE AMERICANA.

Great American Aloe.

CLASS VI. ORDER I.

HEXANDRIA MONOGYNIA. Six Chives. One Pointal.

ESSENTIAL GENERIC CHARACTER.

CALYX nullus. Corolla monopetala, sex-partita. Stamina sena, corolla longiora. Germen inferum. Stylus longior staminibus. Capsula trilocularis, trivalvis. Semina numerosa.

EMPALEMENT none. Blossom one-petalled, six-parted. Chives six, longer than the blossom. Seed-bud beneath. Shaft longer than the chives. Capsule three-celled, three-valved. Seeds many.

SPECIFIC CHARACTER.

AGAVE, acaulis, foliis dentatis, spinosis: scapo e medio ramoso: floribus terminalibus in umbellis densissime capitatis: tubo corollæ læte viridi, e medio angustato: staminibus corolla longioribus: stylo staminibus longiore.

AGAVE, without a stem; leaves toothed and thorny: flower-stem in the centre branched: the flowers terminate the branches in close-headed umbels: the tube of the blossom is greenish, and narrowed in the centre: the chives are longer than the flowers, and the style longer than the chives.

REFERENCE TO THE PLATE.

1. A plant in miniature.
2. A flower natural size.
3. The same spread open.
4. Seed-bud cut transversely.
5. The end of a leaf, the upper part scraped to show its thready fibres.

THIS tall and stately plant has ever been regarded, in this country, as an object of sufficient interest and curiosity to merit an exposure in the form of an exhibition; whilst in the southern parts of Spain and Portugal they are so abundant as to form hedges, by way of barriers to repress the inroads of cattle. There are several very slight varieties; one of whose leaves are edged with yellow, but the same in every other respect. Miller enumerates one whose paniculated flowers bear a very different aspect. Cortusus is said to be the first European that possessed this great Aloe, about the year 1561: in 1714 two flowered at Hampton Court, and one at the duke of Buckingham's. At Friedericksberg, in Denmark, one flowered with 19 branches and 4000 flowers; and one in the king of Prussia's garden, said to be 40 feet high. They are now more frequently found in bloom, as rarely a year passes without one or more of them being advertised for public inspection. In addition to their grand exterior, they possess many useful properties: Cavanilles, in his Natural History of Valentia, mentions their abundance, and the numbers of people employed in manufacturing them; for, when bruised, separated, and steeped in water, they yield a strong thread, of which all the bags are made in which dollars are imported. The juice of the leaves is said to be used as a succedaneum for soap, and the spungy substance of the stem for tinder. The points of the leaves are by the Indians made use of to head their arrows, whose hard consistence is a good substitute for iron; and the thready character of their fibres furnishes all that is necessary to fasten them. Linnæus has separated this genus from Aloe, from the extension of the stamens and style beyond the corolla, and the resting of the corolla on the germ: they also differ in growth, as all Agaves have their central leaves closely enfoliating and embracing the flower-stem, which, forming in the centre, never appears till they are expanded; it then proceeds with a rapidity that in a few weeks reaches maturity, and when the flowers are past the plant dies. On the contrary, the flower-stem of the Aloe comes out from the side annually from the same plant. Our figure was made from two plants at Kensington Gore, each bearing 2000 flowers, and about 70 years old, belonging to J. Vere, Esq. who perfectly recollects them for above half a century: but in those warmer climes, where they are so abundant, 25 or 30 years are sufficient to bring them to perfection.

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Agave, Americana

PLATE CCCCXXXIV.

PULTENÆA NANA.

Dwarf Pultenæa.

CLASS X. ORDER I.

DECANDRIA MONOGYNIA. Ten Chives. One Pointal.

ESSENTIAL GENERIC CHARACTER.

CALYX quinquedentatus, utrinque appendiculatus. Corolla papilionacea, alis vexillo brevioribus. Legumen uniloculare, dispermum.

CUP five-toothed, with a hanging prop on each side. Blossom butterfly-shaped, the wings shorter than the standard. A one-celled pod, two-seeded.

SPECIFIC CHARACTER.

PULTENÆA, foliis iliciformibus, undulatis, contortis, rigidis, acutis: floribus minii colore, axillaribus, racemosis. Caulis humilis.

PULTENÆA, with holly-shaped leaves, waved, twisted, harsh, and sharp-pointed. Flowers minium-coloured, growing from the insertion of the leaves in longish bunches. Stem low.

REFERENCE TO THE PLATE.

1. The cup, with its appendages.
2. The standard of the blossom.
3. One of the wings of the same.
4. The two leaves which form the keel.
5. The chives magnified.
6. The pointal, natural size.
7. The same magnified.
8. A ripe seed-pod.
9. The same spread open.
10. A ripe seed.

THIS lively little Dwarf Pultenæa we have not as yet seen any where but in the conservatory of G. Hibbert, Esq. where, contrasted with many large magnificent plants, its minute and diminutive form made a perfectly unique appearance. When we first observed it, its height did not exceed an inch and a half. Our figure represents the whole plant, which for six months was in progressive constant bloom, and after flowering ripened its seeds freely; an evident proof of the plant being in a state of perfection. It is now three months since the plant perfected its seeds, during which period we have not perceived the least increase in its size. But, notwithstanding this apparent torpidity, it is now exhibiting the buds of its future blossoms. It has been imagined by some to be the Chorizema of Billardiere, a new plant found by that gentleman in New South Wales whilst in search of the unfortunate La Perouse; but, upon comparing it with the figure in that work, we do not find a sufficient resemblance to induce us to regard it as the same plant.

Pultenæa, Ivaina

PLATE CCCCXXXV.

VERBENA MUTABILIS.

Changeable-flowered Vervain.

CLASS II. ORDER I.

DIANDRIA MONOGYNIA. Two Chives. One Pointal.

ESSENTIAL GENERIC CHARACTER.

COROLLA infundibuliformis, sub-æqualis, curva. Calyx unifoliatus, dentatus, truncatus. Sem. 2, s. 4. nuda. Stam. 2, s. 4.

BLOSSOM funnel-shaped, nearly equal, and curved. Empalement one-leafed, toothed, and cut off. Seeds 2, sometimes 4, naked. Chives 2, sometimes 4.

SPECIFIC CHARACTER.

VERBENA diandra, filamenta quatuor: spica longissima, carnosa, nuda: foliis ovatis, basi productis, dentatis, scabris, villosis: floribus imprimis coccineis, denique incarnatis: caule fruticoso.

VERBENA, with two chives and four filaments. Flower-spike very long, fleshy, and naked. Leaves ovate, lengthened at the base, toothed, rough, and hairy. Flowers at first scarlet, then going off in a flesh colour. Stem shrubby.

REFERENCE TO THE PLATE.

1. The empalement.
2. A flower cut open.
3. Seed-bud and pointal, summit magnified.

THE native place of the Verbena mutabilis seems rather enveloped in obscurity: by some it is supposed to be indigenous to Peru. It is a beautiful plant, and the most desirable Verbena we are acquainted with, as it is at least six months in successive bloom. It is one of those Verbenas that, differing a little from the general character of that genus, has received various titles from different botanists: by Professor Vahl, in his Enumeratio Plantarum, it is called Stachytarpheta. The present species has been recently figured in the Paradisus Londinensis under the title of Cymburus mutabilis, and probably at some future period it may again receive another title: but until we can find some better path to lead us into the open plain of Information, we shall keep jogging on in the old beaten track, in preference to every crooked turning that may bewilder us into the mazy labyrinth of affected Science. Our figure was made from a fine plant in the nursery of Messrs. Colville.

Verbena. mutabilis

PLATE CCCCXXXVI.

CORRÆA VIRIDIFLORA.

Green-flowered Corræa.

CLASS VIII. ORDER I.

OCTANDRIA MONOGYNIA. Eight Chives. One Pointal.

ESSENTIAL GENERIC CHARACTER.

CALYX monophyllus, quadri-dentatus. Corolla petala quatuor. Stamina octo. Germen superum. Capsula quadrilocularis. Semina quatuor.

EMPALEMENT one-leafed, four-toothed. Blossom four-petalled. Eight chives. Seed-bud above. Capsule four cells, and four seeds.

SPECIFIC CHARACTER.

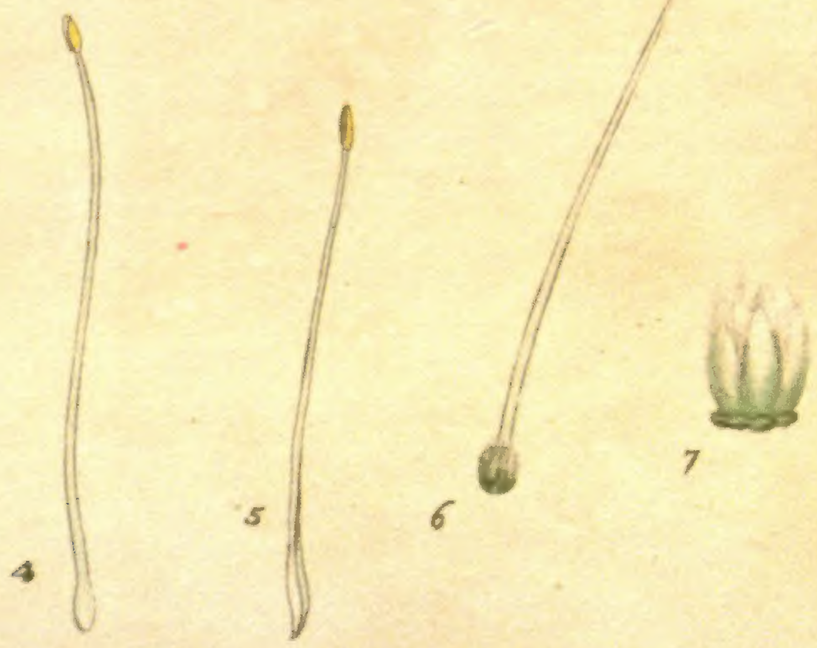
CORRÆA, foliis oblongis, oppositis, undulatis, stellatim hirsutis, supra viridibus, subtus ferrugineis : foliis junioribus conniventibus, flores dum parvos obscurantibus, qui postea emergunt ex axillis foliorum, et dependent. Corolla viridis, leviter punctata, petalis adhærentibus in forma cylindrica. Rami oppositi, ferruginei.

CORRÆA, with oblong opposite leaves, waved, and beset with divers starlike specks ; green on the upper surface and rusty beneath : the younger leaves connive together, and obscure the flowers when young, which afterwards emerge from the axillæ of the leaves, and hang down. Blossom green, and lightly dotted, the petals adhering in the form of a tube. The branches are opposite, and rusty.

REFERENCE TO THE PLATE.

1. The empalement.
2. A blossom detached from the cup.
3. A flower spread open.
4. One of the longest chives.
5. One of the shorter ones.
6. Seed-bud and pointal.
7. Seed-bud magnified.

THIS green-flowered Corræa is by no means so desirable a plant as the alba, but is the only addition to this genus as yet in cultivation with us, and as such deserving notice. It has been already figured in the Exotic Botany of Dr. Smith, but very imperfectly, as it is there represented with only two divisions in the corolla instead of four, and six antheræ instead of eight—a deficiency we have not met with: and although we have examined a number of living and dried specimens, yet we have always found it perfect in those characters essential to the genus. The only variation we have ever observed has been sometimes a super-abundance of petals in the corolla; (instead of a deficiency) five instead of four, a frequent occurrence in many genera when the plant is in a state of luxuriant growth: and certainly little illustration, but much confusion, might probably arise from giving a figure from any specimen so very defective. We find this genus published by Billardiere under the title Mazeutoxeron—our present figure under the specific of rufum—an excellent specific, were it not a striking feature in every species of this genus, living or dried, that we have as yet seen. Our figure was made from a plant in the collection of G. Hibbert, Esq.



Correa, viridiflora

PLATE CCCCXXXVII.

PROTEA CANALICULATA.

Channelled-leaved Protea.

CLASS IV. ORDER I.

TETRANDRIA MONOGYNIA. Four Chives. One Pointal.

ESSENTIAL GENERIC CHARACTER.

COROLLA 4-fida, seu 4 petala. Antheræ lineares, petalis infra apicem insertæ. Calyx proprius, nullus. Semina solitaria.

BLOSSOM four-cleft, or four petals. Tips linear, inserted into the petals below the ends. Cup proper, none. Seeds solitary.

SPECIFIC CHARACTER.

PROTEA, foliis canaliculatis, incurvatis, rigidis, linearibus, acutis: floribus purpureis, terminalibus: caule rubro.

PROTEA, with channelled leaves, incurved, harsh, linear, and sharp-pointed: flowers purple, and terminating the branches: stem red.

REFERENCE TO THE PLATE.

1. One of the scales of the empalement.
2. The chives magnified.
3. Seed-bud and pointal, summit magnified.

THIS fine Protea is of recent introduction, within the last four or five years, from the Cape of Good Hope to the gardens of G. Hibbert, Esq. From the particular strong channel on the back of its leaves we have adopted its specific title, and have no doubt that a feature so visible in every stage of the plant will always discriminate it. The leaves are enlivened by such brilliant red stalks, as, in addition to its flower, render it an attractive object: nor is it so difficult to preserve as many of them are; for the greatest of care is requisite to preserve numbers of this fine tribe from the damps of this island, an enemy they are so little accustomed to in their native clime.

Protea, canaliculata

PLATE CCCCXXXVIII.

PROTEA SPECIOSA.

Showy Protea.

CLASS IV. ORDER I.

TETRANDRIA MONOGYNIA. Four Chives. One Pointal.

ESSENTIAL GENERIC CHARACTER.

COROLLA 4-fida, seu 4 petala. Antheræ lineares, petalis infra apices insertæ. Calyx proprius, nullus. Sem. solitaria.

BLOSSOM four-cleft, or of four petals. Tips linear, inserted into the petals below the points. Cup proper, none. Seeds solitary.

SPECIFIC CHARACTER.

PROTEA, foliis lanceolatis, obliquis, pilosis, undulatis: squamis calycinis superioribus, lanceolatis, barbatis, luteo-albis; squamis infra lato-ovatis, tomentosis, barbatis, apice discoloratis: caulis erectus, tripedalis.

PROTEA, with leaves lance-shaped, oblique, hairy, and waved: the upper scales of the empalement are lance-shaped, bearded, and of a yellowish white: the scales beneath are broadly ovate, downy, bearded, and discoloured towards the ends. Stem erect, and three feet high.

REFERENCE TO THE PLATE.

1. A blossom, the petals spread to show the situation of the chives.
2. The seed-bud and pointal.

THIS fine large Protea we believe is not at present in any other collection in Europe, but that of G. Hibbert, esq. It is enumerated in the Hortus Kewensis under the name of Protea speciosa, but the plant itself has been long lost to those gardens. Thunberg, in his dissertation on Protea, describes our plant exactly, under the appellation of speciosa: and, that no doubt might remain with respect to the specific adopted, our figure has been compared with a remarkable fine specimen in the herbarium of A. B. Lambert, esq., sent by Dr. Roxburgh from the Cape of Good Hope under the title of "Protea speciosa of Hottentot Island." It is undoubtedly one of the grandest of this fine section of Protea; for as a section of this numerous family it will always be better understood than it can possibly be as a discriminative specific. This extended tribe will, we think, admit of at least four or five partitions, but not Generic divisions, for we can by no means agree with those who think every slight variation of sufficient consequence to form new genera; and in this genus think it more objectionable than in any other. The title of Protea being derived from the God Proteus of ever-varying form, the more removed this tribe of plants are in their externa facie from each other, so much the better do they support their mythologic title.

Bolea, speciosa

PLATE CCCCXXXIX.

STAPELIA ORBICULARIS.

Orbicular Stapelia.

CLASS V. ORDER II.

PENTANDRIA DIGYNIA. Five Chives. Two Pointals.

GENERIC CHARACTER.

CALYX. Perianthium quinquefidum, acutum, parvum, persistens.

COROLLA. Monopetala, crassa, quinquefida, acuta, contorta.
Nectaria duplicia, stelliformia; superiore genitalia tegente.

STAMINA sub-sessilia, ad nectarium adhærentia. Antheræ bifidæ.

PISTILLA. Germina duo, oblonga, acuminata. Styli duo, subulati. Stigma utroque commune, magnum, crassum, pentagonum.

PERICARPIUM. Folliculi duo, uniloculares, univalves.

SEMINA numerosa, pappo coronata.

EMPALEMENT. Cup five-cleft, sharp, small, and remaining.

BLOSSOM one-petalled, thick, five-parted, pointed, and twisted.
Honey-cups double and starlike; the upper nectary hiding the parts of fructification.

CHIVES nearly sessile, and attached to the nectary. Tips two-cleft.

POINTAL. Seed-buds two, oblong, and tapered. Shafts two, awl-shaped. Summit common to both, large, thick, and five-cornered.

SEED-VESSEL. Two pods, one-celled, one-valved.

SEEDS numerous, and crowned with a feather.

SPECIFIC CHARACTER.

STAPELIA orbicularis; ramis pluribus, erecto-patentibus, tetragonis, dentatis; corollis quinquefidis, in medio orbiculatis, densissime punctatis; laciniis cordatis, rugosis, striatis, fuscatis.

STAPELIA with orbicular flowers; branches numerous, erect and spreading, four-sided, and toothed; blossom five-cleft, rounded in the centre, and closely dotted; segments of the border are heart-shaped, wrinkled, and striped with brown.

REFERENCE TO THE PLATE.

1. The empalement, nectaries, chives and pointals.
2. The nectaries, chives, and pointals, magnified.
3. A section of the above, magnified.
4. The same shown in a side direction, to expose the situation of the chives.
5. The seed-buds, shafts, and summit.

THIS perfectly new Stapelia we have not met with in any other collection but that of Messrs. Loddige, from whom we received it under the title of orbicularis, a specific derived from the circular centre of the flower a very discriminative appellation; and, although not exclusively the character of this species, is much more distinctly marked in this plant than in any other we have as yet seen. Upon comparing our figure with forty-one species described and figured by Mr. F. Masson, not any affinity could be discerned powerful enough to render a reference by any means requisite: there is a sombre appearance annexed to almost all the flowers of this most curious tribe, and they more resemble pieces of mechanism than the vegetable productions of nature. They require but little water in summer, and still less in winter; should be carefully sheltered from rain and frost, and they will succeed very well, and are easily propagated by slips from the joints, but very rarely seed in this country. Natives of the Cape of Good Hope, and are called Stapelias after a Dutch botanist of the name of Stapel.

1

2

3

4

5

Stapelia orbiculata

PLATE CCCCXL.

SOPHORA SERICEA.

Silky-leaved Sophora.

CLASS X. ORDER I.

DECANDRIA MONOGYNIA. Ten Chives. One Pointal.

ESSENTIAL GENERIC CHARACTER.

CALYX quinquedentatus, superne gibbus. Corolla papillonacea, alis longitudine vexilli. Pericarpium, legumen.

EMPALEMENT five-toothed, the upper ones gibbose, or gouty. Blossom butterfly-shaped, with the wings the length of the standard. Seed-vessel, a pod.

SPECIFIC CHARACTER.

SOPHORA, foliis sericeis, oblongis, alternatis, pilo mollissimo lucido omnino tectis, apice acutis, revolutis, ad basin stipulis parvis; floribus simplicibus, axillaribus, pallide purpureis; caulis argenteus.

SOPHORA with silky leaves, oblong, alternate, and entirely covered by a very soft shining hair, sharp-pointed, and rolled back, with small stipulæ at their base; flowers grow singly from the axillæ of the leaves, and of a pale purple; stem silvery.

REFERENCE TO THE PLATE.

1. The empalement.
2. The standard.
3. One of the wings.
4. The keel.
5. The chives and pointal.
6. The same magnified.
7. Seed-bud and pointal, summit magnified.

THIS delicate Sophora may literally be said to be an old plant with a new face, as we have been long familiar with the foliage, but entirely unacquainted with its flowers, till very lately we found it in luxuriant bloom (and we believe for the first time in this country) in the conservatory of G. Hibbert, esq. this month (December), probably not the regular period of its inflorescence, but the effect of casualty assisted by the uncommon mildness of the season. It would be a vain endeavour to attempt to do justice to the beautiful shining silky appearance of the leaves; and when aided by its delicate purple flowers, its attraction is equal, if not superior, to any of the genus. The want of freedom in its flowering is a defect not entirely confined to this species only, but is in some degree attached to most Sophoras. It is a native of the Cape of Good Hope, and requires as much air as can with safety be administered to it in this country.

Tab. 40.

Lythrum virgatum

PLATE CCCCXLI.

EPIDENDRUM FUSCATUM.

Brown-flowered Epidendrum.

CLASS XX. ORDER I.

GYNANDRIA DIANDRIA. Chives on the Pointals. Two Chives.

ESSENTIAL GENERIC CHARACTER.

NECTARIUM turbinatum, obliquum, reflexum.

HONEY-CUP top-shaped, oblique and reflexed. See Pl. XIII. Vol. I. Epidendrum cochleatum.

SPECIFIC CHARACTER.

EPIDENDRUM, foliis lanceolatis, caulem vagina alterne tegentibus, contortis, atro-purpureo discoloratis; floribus umbellatis terminalibus fuscatis, leviter punctatis, vel striatis.

EPIDENDRUM, with lance-shaped leaves, alternately sheathing the stem, twisted, and discoloured with a deep purple: flowers terminate the branches in umbels, of a brownish colour, dotted or striped.

REFERENCE TO THE PLATE.

1. The nectary, or honey-cup.
2. The blossom detached.
3. The seed-bud, chives, and pointal, the hood lifted up that covers the chives.
4. The same magnified.

AMONGST this numerous parasitic tribe there are many whose claim to beauty is by no means powerful, and certainly the present figure has little to boast of in that particular: but the singular and curious structure of their flowers will always render every new species and even distinct varieties desirable, particularly as they are an essential connecting link in the interesting family of the Orchidiæ. We were at first inclined to regard it as the E. fuscatum of Dr. Smith on rare plants; but on comparison with that figure we found it in foliage nearly the same, but so different both in the size and colour of its flowers, that, if it might be regarded as a variety, it must certainly be a very distinct one. It is a native of Jamaica, and as such requires the protection of the stove. From a plant plunged in the tan-bed our drawing was made at the gardens of G. Hibbert, esq.

Eupatorium perfoliatum

PLATE CCCCXLII.

PROTEA PULCHELLA, *Var. speciosa.*

Waved-leaved Protea, Speciosa Variety.

CLASS IV. ORDER I.

TETRANDRIA MONOGYNIA. Four Chives. One Pointal.

ESSENTIAL GENERIC CHARACTER.

COROLLA 4-fida, seu 4 petala. Antheræ lineares, petalis infra apices insertæ. Calyx proprius, nullus. Sem. solitaria.

BLOSSOM four-cleft, or four petals. Tips linear, inserted into the petals below the points. Cup proper, none. Seeds solitary.

SPECIFIC CHARACTER.

PROTEA, foliis lanceolatis, undulatis, rubro marginatis, pilosis; squamis calycis tricoloratis; capitulo-erecto, terminali: caule ramoso, bipedali.

PROTEA, with lance-shaped leaves, waved, margined with red, and hairy; scales of the cup three-coloured: flower-head upright, and terminal: stem branching, and two feet high.

REFERENCE TO THE PLATE.

1. The empalement and chives.
2. Seed-bud and pointal.

OUR figure represents so evident a variation of the Protea pulchella, that it probably should be only regarded as a fine large flowering variety; but as it exhibits a strong affinity in the flowers to that fine section of Protea called Speciosa, it is certainly better to denominate it a variety of that species, than to adhere too closely to the appellation of its original, whose specific is of too indiscriminative a character to be adopted any further than the acceptation of it already may have rendered necessary. The only method to avoid confusion in this extended varying tribe in future, will be to make as few species as possible in addition to those already made, unless they can be founded upon some apparent leading feature in the plant. Our drawing was made from the Hibbertian collection.

Protea pulchella. Var. spuria

PLATE CCCCXLIII.

ERYTHRINA SPECIOSA.

Showy Erythrina.

CLASS XVII. ORDER IV.

DIADELPHIA DECANDRIA. Chives in two sets. Ten chives.

GENERIC CHARACTER.

CALYX. Perianthium monophyllum, integrum, tubulosum, ore superne emarginatum, inferne poris melliferis instructum.

COROLLA. Papilionacea.

Vexillum lanceolatum, lateribus deflexum, adscendens, longissimum.

Alæ sub-ovatæ, calyce vix longiores, extra tubum vexilli vix eminentes, minimæ.

Carina recta, longitudine alarum, dipetala, emarginata.

STAMINA. Filamenta diadelpha, filamenta decem, inferne connata, parum incurva, longitudine dimidii vexilli, inequalia, sagittata.

PISTILLUM. Germen pedicellatum, subulatum, attenuatum in stylum subulatum, longitudine staminum. Stigma terminale, simplex.

PERICARPIUM. Legumen longissimum, ac seminis nondum tumidis acuminate terminatum, uniloculare.

SEMINA reniformia.

Obs. *E.* Herbacea staminibus decem distinctis.

EMPALEMENT. Cup one-leafed, entire and tubular, emarginated on the upper part, the part beneath with little pores containing honey.

BLOSSOM. Butterfly-shaped.

Standard lance-shaped, bowing sideways, ascending, and very long.

Wings nearly egg-shaped and scarcely longer than the tube of the empalement, outside the standard and very small.

Keel straight out, the length of the wings, two-petalled and emarginated.

CHIVES. Threads in two sets, ten threads joined together beneath, slightly turned inwards, half the length of the standard, unequal, and arrow-headed.

POINTAL. Seed-bud with a footstalk awl-shaped, and tapering into the shaft, which is awl-shaped, and of the length of the stamens. Summit terminating simple.

SEED-VESSEL. A very long pod, and before the seeds are swelled out terminated with a sharp point; of one cell.

SEEDS kidney-shaped.

Obs. E. Herbacea has ten distinct stamens.

SPECIFIC CHARACTER.

ERYTHRINA speciosa, foliis magnis, ternatis; foliolis cordatis, subtus nervosis aculeatis. Caulis tripedalis, erectus, spinosus, viridis.

ERYTHRINA with showy flowers, leaves large and three-divided; leaflets heart-shaped, with prickly nerves on the under side. Stem three feet high, upright, thorny, and green.

REFERENCE TO THE PLATE.

1. The empalement.
2. A blossom spread open.
3. The standard.
4. One of the wings.
5. The keel.
6. The chives spread open.
7. Seed-bud and pointal.

THIS superb Erythrina was communicated to the author by A. B. Lambert, esq., with whom it flowered in the month of November, for the first time in this kingdom. It is at present treated as a hot-house plant, but Mr. Lambert informs us that it is perfectly hardy, and strikes so freely that, although at present it is a nondescript and very rare plant, it will, doubtless, soon make its appearance in most collections: its splendid flowers and easy culture will soon recommend it into general notice. There are but five species of this genus yet known; the present subject will therefore be a valuable addition to the number. The falling off of the leaves is its only defect, which we have no doubt but a hardier mode of treatment will remove. It is supposed to be a native of South America.

Pl 446

Erythrina ...

PLATE CCCCXLIV.

LOBELIA HIRSUTA.

Hairy Lobelia.

CLASS XIX. ORDER VI.

SYNGENESIA MONOGAMIA. Tips united. Flowers simple.

ESSENTIAL GENERIC CHARACTER.

CALYX 5-fidus. Corolla 1-petala, irregularis. Capsula infera 2- seu 3-locularis.

CUP 5-cleft. Blossom, 1-petalled, irregular. Capsule beneath, 2 or 3 celled.

See Pl. CCLXXIII. Vol. IV. Lobelia pinifolia.

SPECIFIC CHARACTER.

LOBELIA foliis hirsutis, inferioribus oblongis, dentatis, hirsutis; floribus albis, solitariis axillaribus; pedunculis elongatis; stigmatibus obtusis, pilosis; caule fruticosa, pilosa, petente.

LOBELIA with hairy leaves; the lower ones are oblong, toothed and hirsute: flowers white, and grow singly from the base of the leaves: foot-stalks lengthened: summits blunt, and hairy: Stem shrubby, hairy, and spreading.

REFERENCE TO THE PLATE.

1. The flower and chives spread open and magnified.
2. Seed-bud and pointal, summit magnified,

THE Lobelias are an extensive family, but in a very confused state at present; not many of them having been described, and almost all that have been figured are blue flowers, a scarce colour in most genera, although so prevalent in this, and most probably to the attraction of this colour is chiefly owing the notice already taken of them: for, as beautiful little annuals, they have an irresistible claim to our attention. Our present subject does not possess the charm of colour, but from its lively white flowers and constant succession of bloom it is well deserving a place in the green-house. Our figure represents an entire plant, taken from the Cape Nursery of Messrs. Middlemist and Wood, near Shepherd's Bush on the Edgware Road.

Pl. 44

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Lobelia hirsuta

PLATE CCCCXLV.

EPIDENDRUM LINEARE.

Linear-leaved Epidendrum.

CLASS XX. ORDER I.

GYNANDRIA DIANDRIA. Chives on the Pointal. Two Chives.

ESSENTIAL GENERIC CHARACTER.

NECTARIUM turbinatum, obliquum, reflexum.

HONEY-CUP top-shaped, oblique, and reflexed. See Pl. XIII. Vol. I. Epidendrum cochleatum.

SPECIFIC CHARACTER.

EPIDENDRUM, foliis linearibus, caulem vagina alterne tegantibus, apice crenatis: floribus terminalibus, spicatis, alternatis, purpureis; caulis juncinus, longus, gracilis.

EPIDENDRUM, with linear leaves, alternately sheathing the stem, and notched at the end: flowers terminate the branches in a spike, alternate, and purple: stem rush-like, long, and slender.

REFERENCE TO THE PLATE.

1. The blossom without the honey-cup, spread open to show the chives.
2. The same magnified.
3. The honey-cup magnified.
4. The pointal magnified.

IN the Icones of Jacquin we find a figure of this Epidendrum, under the appellation we have adopted, but evidently taken from a dried specimen, with a reference to the Icones of Father Plumier 182, fig. 1. under the title of Heleborine; but on comparison we find no affinity sufficiently powerful to induce us to regard them as representing the same plant. In Plumier's figure there is no incisure at the end of the leaves, a specific character in our plant; the rest of the figure is also too obscure to admit of comparison. The plant, from its long and slender stalks, acquires a graceful bend when in flower. As a native of Jamaica it requires the tan-bed of the hot-stove for its protection; and, like many other tropical plants, is subject to lose much of its beauty by the loss of the leaves on the lower part of the stem. Our figure was made from the Hibbertian Collection.

Epidendrum, lineare

PLATE CCCCXLVI.

DOLICHOS HIRTUS.

Hairy-stemmed Dolichos.

CLASS XVII. ORDER IV.

DIADELPHIA DECANDRIA. Chives in two sets. Ten Chives.

ESSENTIAL GENERIC CHARACTER.

VEXILLUM callis duobus ad basin, parallelis, oblongis, alis subtus comprimentibus.

STANDARD with two callosities at the base; parallel, and of an oblong form; the wings beneath binding together.

SPECIFIC CHARACTER.

DOLICHOS hirtus; caule volubili, tecto ferrugineis pilosis; floribus luteis striatis rubris; foliis ternatis; foliolis sub-cordatis, subtus pilosis; stipulis duabus ad basin; radice tuberosa.

DOLICHOS with a hairy stem: the stalk is twining, and covered with rusty hairs: flowers are yellow, and striped with red: leaves ternate; leaflets nearly heart-shaped, and hairy beneath, with two stipulæ at their base: root tuberous.

REFERENCE TO THE PLATE.

1. The cup.
2. The standard.
3. One of the wings shown from the inside
4. The keel.
5. The chives and pointal.
6. The chives spread open.
7. The seed-bud and pointal.

THIS handsome twining plant was introduced from the Cape of Good Hope to the gardens of G. Hibbert, esq. about the year 1802, and flowered very luxuriantly, but did not perfect any of its seeds nor make any approach towards it, as the flowers with their empalements all fell off together immediately after flowering; and for the last three or four years the plant (although apparently in a healthy state) has not indicated the least appearance of bloom; and we are inclined to think it might possibly succeed better with the careful treatment of the dry stove than with its present situation in the hot-house; and if upon experiment it should prove successful, it would then doubtless become a plant in request by many cultivators who whilst it remains a hot-house plant cannot give it a place in their collection

This genus approaches so near to that of Phaseolus, that we cannot help thinking one generic title would have been sufficient for them both.

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PLATE CCCCXLVII.

PROTEA ARGENTIFLORA.

Silvery-flowered Protea.

CLASS IV. ORDER I.

TETRANDRIA MONOGYNIA. Four Chives. One Pointal.

ESSENTIAL GENERIC CHARACTER.

COROLLA 4-fida, seu 4 petala. Antheræ lineares, petalis infra apices insertæ. Calyx proprius, nullus. Sem. solitaria.

BLOSSOM four-cleft, or of four petals. Tips linear, inserted into the petals below the points. Cup proper, none. Seeds solitary.

SPECIFIC CHARACTER.

PROTEA argentiflora; floribus paniculatis, densissime confertissimis, parvis rotundatis capitatis, fragrantibus, nitidissimis; foliis bipinnatis, linearibus, apice acutis, erecto-patentibus.

PROTEA with silvery flowers: the flowers grow in panicles, closely crowded together, in little round heads, sweet-scented and very shining: leaves twice divided, linear, sharp-pointed, and between erect and spreading.

REFERENCE TO THE PLATE.

1. One of the scales.
2. A blossom detached from the umbel.
3. A section of it magnified.
4. Seed-bud and pointal, summit magnified.
5. The cone with the scales attached.
6. The same without the scales.
7. The naked cone.

FROM the shining silvery appearance of this Protea we have drawn its specific title, although aware of the insurmountable difficulty of doing justice to it: but in so extended a genus it will be frequently impossible to give a discriminating or unoccupied specific from its foliage:—our title may always be ascertained when the plant is in bloom, whether in perfection or not, as the flowers living or dead always retain a shining silvery aspect. It also possesses a most exquisite sweet scent; but its superior fragrance only exists whilst the flowers are in perfection; as after that period it grows fainter, and is at last scentless. Our figure was made from the collection of G. Hibbert, esq.

Protea argentiflora

PLATE CCCCXLVIII.

PÆONIA SUFFRUTICOSA; *Var. flore purpureo.*

Shrubby Pæony; Purple-flowered Variety.

CLASS XIII. ORDER V.

POLYANDRIA PENTAGYNIA. Many Chives. Five Pointals.

ESSENTIAL GENERIC CHARACTER.

Calyx 5-phyllus. Petala 5. Styli 0. Capsulæ polyspermæ.	Cup 5-leaved. Petals 5. Pointal none. Capsules many-seeded.

SPECIFIC CHARACTER.

Pæonia caule suffruticoso, tripedali, ramoso: folia alternatim bipinnata, pedalia et ultra, bifida et trifida, subtus glauca: petiolis longis, canaliculatis, amplexicaulibus: floribus semi-duplicibus, purpureis, splendentibus.	Pæony with a shrubby stem, three feet high, and branching: leaves alternately two-winged, a foot or more in length, two- and three-cleft, glaucous beneath; the petioles are long, channelled, and embracing the stem: flowers semi-double, purple, and very splendid.

This elegant plant is the purple variety mentioned in our last Vol. Pl. 373. and flowered at the same time, with completely double flowers, and so equal in point of beauty, that we hesitated some time before we could determine to which we should give the preference. But had we seen the purple one in its present semi-double state, it would undoubtedly have claimed precedence, as well from its preserved botanic character, as its superior beauty. The singular versatility of these plants we were entirely unacquainted with when we figured the rose-coloured one; as, since that period, we have seen them in bloom with single flowers, the following year with double ones; and again the year after we found this purple one in the semi-double state which our figure represents, the plant then bearing five-and-twenty flowers in full perfection, forming a coup-d'œil superior to any shrub we have ever seen.

Pl. [illegible]

Paeonia suffruticosa Var. flore purpureo

PLATE CCCCXLIX.

LINUM TRIGYNUM.

Three-styled Golden Flax.

CLASS V. ORDER V.

PENTANDRIA PENTAGYNIA. Five Chives. Five Pointals.

GENERIC CHARACTER.

CALYX. Perianthium pentaphyllum, lanceolatum, erectum, persistens.

COROLLA. Petala infundibuliformia quinque, oblonga, superne sensim latiora, obtusa, patentia.

STAMINA. Filamenta quinque subulata, erecta, longitudine calycis (rudimenta filorum insuper 5, alternantia). Antheræ simplices, sagittatæ.

PISTILLUM. Germen ovatum. Styli 5, filiformes, erecti, longitudine staminum. Stigmata simplicia, reflexa.

PERICARPIUM. Capsula globosa, pentagona, decemlocularis, quinquevalvis.

SEMINA solitaria, ovato-planiuscula, acuminata, glabra.

EMPALEMENT. Cup five-leaved, lance-shaped, upright, and remaining.

BLOSSOM. Funnel-shaped petals five, oblong, widening upwards by degrees, obtuse, and spreading.

CHIVES. Five filaments, awl-shaped, upright, the length of the calyx (there are five alternate slight rudiments of threads). Anthers simple, and arrow-shaped.

POINTAL. Seed-bud ovate. Shafts 5, thread-shaped, and upright, the length of the stamens. Summits simple, and reflexed.

SEED-VESSEL. Capsule globular, five-sided, ten-celled, five-valved.

SEEDS solitary, of a flattish oval form, sharp-pointed, and smooth.

SPECIFIC CHARACTER.

LINUM trigynum, foliis alternis, ovatis, glabris, apice acuminatis: floribus in ramis simpliciter terminalibus: corolla aurea, magna: ramulis alternis, numerosis, viridibus.

FLAX with three pointals; leaves alternate, ovate, and smooth, pointed at the end: flowers terminate the branches singly: blossoms gold colour, and large: the smaller branches alternate, numerous, and green.

REFERENCE TO THE PLATE.

1. The empalement.
2. One of the petals.
3. Chives and pointals.
4. A chive magnified.
5. Seed-bud and pointals, a summit magnified.
6. The seed-bud cut transversely, magnified.

THIS perfectly new Linum is by far the most showy of the genus, and illumines all the gloomy months of winter with its fine large flowers, whose brilliance is not often surpassed even in the height of summer, when Flora reigns with undiminished lustre. It has been hitherto regarded as a hot-house plant, but is now found to succeed much better with the careful treatment of the green-house. It is published by Capt. Hardwicke in his enumeration of the plants of Sireenagur in the Asiatic Annual Register of 1800, and was found by that gentleman on the sides of the mountains in fine bloom in the month of December, and from whom it received the specific title of trigynum. Its provincial name is said to be Gul Ashorfee; from Gul a flower and Ashorfee gold, a coin current in India of the value of 2*l.* sterling. There is a figure of this Linum in the Exotic Botany of Dr. Smith, copied from a drawing, and represented with deeply serrated leaves; a character very different from any of the living plants we have as yet seen in bloom, not one of them exhibiting the slightest vestige of a serrature on their foliage. Our figure was made from a plant in luxuriant bloom at the nursery of Messrs. Whitley and Brames.

Pl. 449

Lonicera Periclymenum

PLATE CCCCL.

ALBUCA FASTIGIATA.

Level-topped Albuca.

CLASS VI. ORDER I.

HEXANDRIA MONOGYNIA. Six Chives. One Pointal.

GENERIC CHARACTER.

CALYX nullus.

COROLLA hexapetala; tribus interioribus conniventibus, exterioribus patulis.

STAMINA. Filamenta sex, apice inflexa, basi dilatata. Antheræ oblongæ, in medio affixæ. Stylus triqueter. Stigma triquetrum.

PERICARPIUM. Capsula oblonga, angulata, 3-locularis, 3-valvis.

SEMINA numerosa, plana.

OBS. In quibusdam speciebus tria stamina sterilia sunt.

EMPALEMENT none.

BLOSSOM. Six petals; the three inner ones conniving together, the outer ones spreading.

CHIVES. Six threads turned inwards at the points, and widened at the base. Tips oblong, and fastened in the centre. Shaft three-sided. Summit three-cornered.

SEED-VESSEL. Capsule oblong, angular, 3-celled, 3-valved.

SEEDS many, flat.

OBS. In some species three of the stamens are steril.

SPECIFIC CHARACTER.

ALBUCA foliis lanceolato-ensiformibus: floribus erectis, paniculatis, fastigiatis, pedunculis longissimis: corollis albis, in medio lineâ viridi: petalis interioribus apice fornicatis, stamina includentibus, quæ sunt omnia fertilia.

ALBUCA with leaves between lance- and sword-shaped: flowers upright, and grow panicu-lated and level: footstalks very long: blossoms white, with a stripe of green in the centre; the inner petals forming an arch at the end, and enclosing the stamens, which are all fertile.

REFERENCE TO THE PLATE.

1. One of the flower-props.
2. The chives and pointal.
3. One of the outer chives.
4. One of the inner ones.
5. Seed-bud and pointal.

THIS genus approaches so near to Ornithogalum, that they may easily be mistaken for each other; the only visible distinction resting in the unexpanding character of the three inner petals, or calyx; for opinions vary with respect to their denomination—Jussieu, an able botanist (through all the divisions of this family), regarding that as the empalement which we, following Linnæus, describe as petals. In the Species Plantarum of Willdenow we find our plant enumerated under the specific title of fastigiata, with a technical description annexed to it. From a plant in the garden of G. Hibbert, esq. about three years ago, we made a drawing of this Albuca, but are inclined to think it rather scarce, not having seen it since that period.

eae, fasciata

PLATE CCCCLI.

DIOSMA ERICÆFOLIA.

Heath-leaved Diosma.

CLASS V. ORDER I.

PENTANDRIA MONOGYNIA. Five Chives. One Pointal.

ESSENTIAL GENERIC CHARACTER.

COROLLA 5-petala. Nectaria 5 supra germen. Caps. 3. s. 5, coalitæ. Semina tecta.

BLOSSOM. Five petals. Five nectaries above the seed-bud. Seed-vessels 3 or 5, joined together. Seeds covered.

SPECIFIC CHARACTER.

DIOSMA foliis alternis, linearibus, acutis, notatis: floribus in umbellis paniculatis, parvis, albis.

DIOSMA with alternate leaves, linear, sharp-pointed, and marked. Flowers grow in paniculated umbels, small, and white.

REFERENCE TO THE PLATE.

1. A leaf magnified.
2. The empalement magnified.
3. Seed-buds, honey-cups, chives, and pointal.
4. A chive magnified.
5. The honey-cups magnified.
6. Seed-buds and pointal, magnified.

THIS new species of Diosma so nearly resembles the genus Erica in its foliage, that, regarding it as an unequivocally good specific reference, we have adopted it. The only place in which we have as yet seen it was at the Cape nursery last December, where we observed several plants in fine bloom; and although not showy, they are certainly estimable from their neat and delicate appearance, particularly at a season when so many of the beauties of vegetation are in a state of quiescence. Upon comparing our figure with a fine dried specimen of the D. hirsuta in the herbarium of A. B. Lambert, esq., we find so powerful a resemblance as induces us to regard our plant as only a variation of culture, more especially as in the magnifier slight vestiges of the hairs on the edges of the leaves are still discernible. But no fear need be entertained of any mode of culture rendering our present specific term impervious to the naked eye. There is a dotted or punctured character which pervades the under surface of the foliage of most Diosmas, many of which, when rubbed, emit a powerful odour. The present subject, although deficient in both those respects, still possesses a peculiarity that we have thought deserving a magnified place in the dissections. It is a hardy green-house plant, and native of the Cape of Good Hope.

Pl. 81

Leucadendron, erubescens

PLATE CCCCLII.

ACHANIA MOLLIS.

Soft-haired-leaved Achania.

CLASS XVI. ORDER VI.

MONADELPHIA POLYANDRIA. Threads united.. Many Chives.

GENERIC CHARACTER.

CALYX duplex. Interior monophyllus, semi-striatus, sub-cylindraceus, quinquefidus, persistens. Exterior octophyllus, basi leviter coalitus.

COROLLA sub-clavata, convoluta. Petala quinque, basi uno latere alternatim auriculata, lobis columnam staminum convolventibus.

STAMINA. Filamenta plurima, ad basin in tubum corolla longiorem torta, in partem superiorem tubi coalita, cujus apex liberatus est.

PISTILLUM. Germen sub-globosum. Stylus filiformis. Stigma decemfidum.

PERICARPIUM. Bacca sub-globosa, quinque-locularis.

SEMINA solitaria.

EMPALEMENT double. The inner one-leafed, half-striped, nearly cylindrical, five-cleft, and remaining. The outer eight-leaved, and slightly attached at the base.

BLOSSOM nearly club-shaped, and folded together. Petals five, alternately eared on one side of the base, the lobes of which are rolled round the columnar shaft of the stamens.

CHIVES. Threads numerous, united at the base into a tube longer than the blossom, twisted, and united near the upper part of the tube, the point of which is liberated.

POINTAL. Seed-bud nearly round. Shaft thread-shaped. Summit ten-cleft.

SEED-VESSEL. A berry nearly round, with five cells.

SEEDS solitary.

SPECIFIC CHARACTER.

ACHANIA foliis tomentosis, cordatis, trilobatis, dentatis. Calyx exterior revolutus, pubescens. Flores solitarii, axillares. Corolla sub-clavata. Petala convoluta, sub-inclusa, læte coccinea, nervosa, tomentosa. Caulis fruticosus, villosus, sub-tripedalis.

ACHANIA with downy leaves, heart-shaped, three-lobed, and toothed. The outer cup is revolute, and hairy. Flowers grow solitary from the axillæ of the leaves. Blossom nearly club-shaped. The petals are folded together and nearly closed, of a bright scarlet colour, nerved, and downy. Stem shrubby, hairy, and near three feet high.

REFERENCE TO THE PLATE.

1. The empalement.
2. A blossom spread open.
3. A petal detached, shown from the outside.
4. The chives spread open.
5. Seed-bud and pointal, summit magnified.

THIS handsome hot-house plant is certainly an old one, having been a sojourner with us near thirty years, but has not as yet been figured in any publication that we know of:—a neglect most probably resulting from the singularity of its unclosing flowers; so uncommon a character naturally conveying an idea that the plant was in an imperfect state. Under this prejudice it has lost the charm of novelty, and many a less attractive object has been preferred before it. This genus approaches so close to the genera of Hibiscus, Althea, Malva, &c. that it must certainly be considered as a very near relation to that family. Its foliage is frequently deciduous on the lower part of the stem; a defect to which stove plants in general are but too subject. It is a native of South America and the West India Islands, was found by Dr. Houston in Jamaica in 1731, and introduced by B. Bewick, esq. in 1780. It flowers from July till the end of the year.

PLATE CCCCLIII.

PROTEA REPENS.

Creeping Protea.

CLASS IV. ORDER I.

TETRANDRIA MONOGYNIA. Four Chives. One Pointal.

ESSENTIAL GENERIC CHARACTER.

COROLLA 4-fida, seu 4-petala. Antheræ lineares, petalis infra apices insertæ. Calyx proprius, nullus. Sem. solitaria.

BLOSSOM four-cleft, or of four petals. Tips linear, inserted into the petals below the points. Cup proper, none. Seeds solitary.

SPECIFIC CHARACTER.

PROTEA repens, foliis sub-amplexicaulibus, cordatis, undulatis, apice reflexis, acutis, marginibus rubris: floribus sub basin: interius squamarum calycis læte carneum, exterius fusco-purpureum, villosum.

PROTEA with a creeping stem, and leaves nearly surrounding it, which are heart-shaped, waved, bent back at the end, sharp-pointed, and red at the edges: flowers grow towards the base of the plant: the inside of the scales of the empalement are of a bright flesh colour, and the outside of a purply brown, and hairy.

REFERENCE TO THE PLATE.

1. The blossom complete, and one of the chives magnified.
2. Seed-bud and pointal, summit magnified.

THE appearance of this Protea, as cultivated in the gardens, is diametrically opposite to its natural character, which, as its specific indicates, is repent or creeping; instead of which, the branches of the plant are bent from their natural habit, forced as upright as possible, and fastened to a stick; in which situation the flowers only would compare with our figure. But so averse is it to this confined mode of treatment, that, as soon as the branches are liberated, they instantly take the direction most natural to them, and which is certainly the most graceful. Although repens is the more general title of this Protea, yet we have heard it sometimes called amplexicaulis, a name given by some cultivators to a plant whose foliage is so nearly resembling the one now figured, that, when it arrives at a flowering state, it will most probably prove to be no more than a variation of culture. It is a difficult matter to say in what stage the flower is most beautiful, whether in the bud state, before the pointals are released, or afterwards. From their long confinement, the pollen adheres so strongly to them, that when relieved they appear like the antheræ. Our drawing was made at the Hibbertian collection from a plant in fine bloom in the month of February.

Passiflora rubens

PLATE CCCCLIV.

URTICA BACCIFERA.

Berry-bearing Nettle.

CLASS XXI. ORDER IV.

MONŒCIA TETRANDRIA. Chives and Pointals separate. Four Chives.

GENERIC CHARACTER.

* *Masculi flores.*

CALYX. Perianthium tetraphyllum.
COROLLA nulla. *Nectarium* in centro floris cyathiforme.
STAMINA. Filamenta quatuor, subulata, longitudine calycis.

* *Feminei flores vel in eadem vel distincta planta.*

CALYX. Perianthium bivalve, persistens.
COROLLA nulla.
PISTILLUM. Germen ovatum. Stylus nullus. Stigma villosum.
PERICARPIUM nullum.
SEMEN unicum.

* *Male flowers.*

EMPALEMENT four-leaved.
BLOSSOM none. *Honey-cup* is formed in the centre of the flower, like a small cup.
CHIVES. Filaments four, awl-shaped, and the length of the cup.

* *Female flowers in the same, or in separate plants.*

EMPALEMENT. Cup two-valved, and remaining.
BLOSSOM none.
POINTAL. Seed-bud ovate. Shaft none. Summit hairy.
SEED-VESSEL none.
SEED one.

SPECIFIC CHARACTER.

URTICA baccifera, foliis alternis, cordatis, dentatis, aculeis tectis: calyces fœminei, baccati, alternatim in ramos longos divaricatos positi, dependentes, læte rubri, et aculeis tecti: caulis aculeis magnis tectus.

BERRY-BEARING NETTLE with leaves alternate, heart-shaped, toothed, and covered with prickles: empalement female, having berries, and alternately situated upon long straggling branches, hanging down, of a bright red colour, and covered with prickles: stem covered with large prickles.

REFERENCE TO THE PLATE.

1. A flower magnified.
2. The same with the summit detached, magnified.

THIS plant is most completely armed in all directions, and known by the appellation of the Horrid Nettle. The fierceness of its exterior evinces grandeur, and the bright red flower-stems combine some share of beauty: and notwithstanding its ferocious aspect, the Common Wild Hedge Nettle suffers a light approach with less impunity than this terrific plant; thus proving the old axiom of an open enemy, however powerful, being less injurious than a pretended friend, whose insidious character, like the Hedge Nettle, unheeded stings. In the Hortus Schœnbrunnensis of Jacquin it is described and figured, and also in the Icones of Plumier, p. 259, tab. 260, who gives it the additional specific of arborescens: and there is but little doubt of its forming a tree-like appearance in the Antilles and Blue Mountain Valley of Jamaica, where it is indigenous. The figure represents the upper part of a large specimen, communicated by A. B. Lambert, esq. with whom it flowered in the summer of 1804.

PLATE CCCCLV.

POLYGALA MIXTA.

Mixt Polygala.

CLASS XVII. ORDER III.

DIADELPHIA OCTANDRIA. Two Brotherhoods. Eight Chives.

ESSENTIAL GENERIC CHARACTER.

CALYX 5-phyllus: foliolis duobus alæformibus, coloratis: legumen obcordatum, biloculare.

Cup 5-leaved, with two of the leaves like wings, coloured: pod inverse heart-shaped, two-celled.

SPECIFIC CHARACTER.

POLYGALA floribus imberbibus, axillaribus, purpureis: foliis fasciculatis, 5—6 in singulo fasciculo, linearibus, acutis, valde confertis inter flores: caule suffruticoso: ramulis filiformibus, patentibus.

POLYGALA with beardless flowers, growing from the axillæ of the leaves, and of a purple colour: the leaves grow in fascicles, 5 and 6 in each fascicle, linear, sharp-pointed, and very much crowded amongst the flowers: stem shrubbyish: branches thread-shaped, and spreading.

REFERENCE TO THE PLATE.

1. The empalement magnified.
2. The keel magnified.
3. One of the wings magnified.
4. The chives magnified.
5. The pointal magnified.
6. Flower of a white variety.

AMONGST the numerous introductions of novelty to the gardens of G. Hibbert, esq. the Hesteria section of the genus Polygala (although not splendid) are all of them particularly desirable, from their lively, long, and (of this species) we may say continual bloom; it having been seen in flower throughout the whole year. There is a variety of it with white flowers of equal durability, and so perfect a fac simile in every other particular, that a separate figure will by no means be requisite, especially as in the winter season the purple flowers are sometimes almost bleached by the cold, and the distinction in consequence less apparent. It is well known by the cultivators under the appellation of *mixta;* a specific given to it from the promiscuous manner in which the flowers and leaves are profusely mixt together.

PLATE CCCCLVI.

LACHENALIA FLAVA.

Yellow-flowered Lachenalia.

CLASS VI. ORDER I.

HEXANDRIA MONOGYNIA. Six Chives. One Pointal.

GENERIC CHARACTER.

COROLLA 6-petala, infera; petalis 3 interioribus longioribus: stamina erecta: capsula subovata, trialata: semina globosa.

BLOSSOM 6-petalled beneath; the three inner petals the longest: chives erect: capsule nearly egg-shaped, three-winged: seeds globular.

SPECIFIC CHARACTER.

LACHENALIA foliis geminis, lanceolatis: scapo erecto, colore cinereo-cæruleo in modum marmoris variato: corollis flavis, sub-pendulis, sub-cylindraceis, cum limbo petalorum interiorum permagno et expanso: tria petala exteriora angusta, et apice virescentia.

LACHENALIA with leaves in pairs, and lance-shaped: flower-stem upright, and of a slaty-colour obscurely marbled: blossoms yellow, nearly hanging down, somewhat cylindrical, with the border of the inner petals very large and spreading: the three outer petals are narrow, and greenish at the point.

REFERENCE TO THE PLATE.

1. A flower spread open.
2. Seed-bud and pointal, summit magnified.
3. The seed-bud cut transversely, magnified.

THIS Lachenalia may be regarded as a perfectly new species, there not being a figure of it extant, nor is it enumerated in the Species Plantarum of Willdenow. We were at first inclined to have called it ringens, from the wide-gaping character of the mouth of the flower: but as so many of this genus have received a specific title in reference to their colour, the appellation of flava in the present instance will doubtless be generally as well accepted. The figure was made, from the only plant that has as yet flowered in this country, at the nursery of Mr. Williams of Turnham Green, who informs me that he has had the plant three or four years, but has found it difficult to flower, and slow of increase.

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PLATE CCCCLVII.

BANKSIA SPINULOSA.

Thorny-leaved Banksia.

CLASS IV. ORDER I.

TETRANDRIA MONOGYNIA. Four Chives. One Pointal.

ESSENTIAL GENERIC CHARACTER.

RECEPTACULUM commune elongatum, squamosum: corolla tetrapetala: stamina limbo inserta: capsula bivalvis, disperma, dissepimento mobili interjecto: semina alata.

COMMON receptacle elongated, scaly: blossom of four petals: chives inserted into the limb of the blossom: capsule with two valves, two seeds, and a moveable partition between them: seeds winged.

See Banksia serrata, Pl. LXXXII. Vol. II.

SPECIFIC CHARACTER.

BANKSIA foliis linearibus, longis, margine revolutis, sub-apices spinulosis: ramis patentibus, ad basin foliis sparsis, superne fasciculatis.

BANKSIA with long linear leaves, rolled back at the edges, and towards the ends furnished with little thorns: branches spreading, thin of leaves at the base, which are bundled together on the upper part of the branches.

REFERENCE TO THE PLATE.

1. A flower.
2. A blossom spread open, one chive magnified.
3. The pointal, summit magnified.

THE flowers of this Banksia bear a considerable degree of affinity to the B. ericæfolia already figured in Pl. 156, but very distinct in the foliage. From the small thorns on the upper part of the leaves it has acquired the specific title of spinulosa. It is not very often seen in bloom, although an old plant; which is accounted for in the slowness of its growth, and the size it generally attains to before it becomes a flowering plant: and as this character is prevalent through the whole genus, it no doubt prevents them from being so generally cultivated as they would otherwise be; since, when in flower, they are certainly both curious and beautiful. OUR figure was taken from a plant in the collection of His Grace the Duke of Northumberland, at Sion-House near Brentford; where, under the care of Mr. Hoy, several fine species of this genus are in very great perfection.

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Stipple.

PLATE CCCCLVIII.

EUGENIA MALACCENSIS.

Malay Apple Tree.

CLASS XII. ORDER I.

ICOSANDRIA MONOGYNIA. Twenty Chives. One Pointal.

GENERIC CHARACTER.

CALYX. Perianthium monophyllum, superum; in medio orbiculus, supra quem quadripartitum est: laciniis concavis, persistentibus.

COROLLA. Petala quatuor, calyce duplo majora, obtusa, concava.

STAMINA. Filamenta plurima in orbiculo calyci inserta, longitudine corollæ: antheræ parvæ.

PISTILLUM. Germen turbinatum, inferum. Stylus simplex, longitudine staminum. Stigma simplex.

PERICARPIUM. Drupa quadrangularis, coronata, unilocularis.

SEMINA. Nux subrotunda, glabra.

EMPALEMENT. Cup of one leaf, above: in the middle is a little circle, above which it is four-divided: the segments are hollow, and remaining.

BLOSSOM. Petals four, twice the size of the calyx, obtuse, and hollow.

CHIVES. Threads many in a little circle inserted into the calyx: tips small.

POINTAL. Seed-bud top-shaped, beneath. Shaft simple, the length of the stamens. Summit simple.

SEED-VESSEL. A berry four-angled, coronet-shaped, and one-celled.

SEED. A nut nearly round, and smooth.

SPECIFIC CHARACTER.

EUGENIA foliis oppositis, alternis, latis, ovalibus, apice acuto, leviter torto, glabris, lucidis. Caulis erectus. Ramuli superiores dumosi, cortice rugoso, colore pulliginoso: ramis floriferis oppositis, alternis, rectis: corollis alternatim oppositis, purpureis.

EUGENIA with opposite alternate leaves, broad, and of an oval form, with an acute point, slightly twisted, smooth, and shining. Stem upright. The branches above are bushy. The bark is wrinkled, and of a light brown colour. The flower-branches are opposite, alternate, and straight out. The blossoms are alternately opposite, and purple.

REFERENCE TO THE PLATE.

1. A petal.
2. A chive, one tip magnified.
3. The empalement and pointal.
4. A half-ripe fruit.

THE figure of this Eugenia was made from the finest plant in this country in the hot-house of G. Hibbert, esq. where we were in hopes it would have perfected its fruit; but were disappointed, as in a very forward state towards ripening it fell off. But, as far as it was advanced, we have represented it, as in this climate it might probably never arrive at greater maturity, unless a larger house were constructed for it: otherwise the degree of heat necessary to preserve the smaller tropical plants would always be subject to injure those of a large size, from the natural extension of their roots approaching too near the flues. But although so much care is required for it in this clime, in the warmer regions of Macassar, Amboyna, and the Moluccas, where it is indigenous, not the least attention is necessary: for, such is the extreme indolence of the natives, that it is imagined, if any care had been required for its preservation, it would soon have been lost for want of it. In the Hortus Malabaricus of Rheede there is an uncoloured figure of it, with descriptions, in which it is said to be a fruit-tree of great general utility to the country from its extreme abundance, grateful taste, and salubrious quality, flowering twice in the year. The fruit in an unripe state is of a bitterish and rather astringent character; but, when ripe, of a fine flavour, exceedingly wholesome, and beneficial as an allayer of inflammation in feverish habits. The flowers are by the Dutch at Amboyna preserved, and frequently eaten by way of salad. It is said to form a tall umbrageous tree, and when in fine bloom must certainly be an object of great beauty.

Pl. 20

Eugenia malaccensis

PLATE CCCCLIX.

LASIOPETALUM QUERCIFOLIUM.

Oak-leaved Lasiopetalum.

CLASS V. ORDER I.

PENTANDRIA MONOGYNIA. Five Chives. One Pointal.

ESSENTIAL GENERIC CHARACTER.

CALYX triphyllum, tomentosum, persistens. Corolla monopetala, lanuginosa, 5-fida. Filamenta 5, germinis basi affixa. Germen superum. Capsula 3-locularis, 3-valvis.

EMPALEMENT 3-leaved, downy, and remaining. Blossom one-leafed, woolly, and five-cleft. Threads 5, fixed to the base of the seed-bud. Seed-bud above. Capsule 3-celled, 3-valved.

SPECIFIC CHARACTER.

LASIOPETALUM quercifolium, ternatum: foliis duobus ad basin minoribus; supra viridibus, subtus nervosis, ferrugineis, stellatim setis tectis: racemis floriferis longis, foliis oppositis: corollis purpureis. Rami et ramuli, pedunculi, &c. setis stellatim tecti, ferruginei. Caulis humilis.

WOOLLY flower with oak-shaped leaves, by threes; two at the base are smallest; green on their upper surface, veined beneath, of a rusty iron colour, and beset with hairy star-like specks. Flower-branches long, and opposite to the leaves. Blossoms purple. The small and larger branches, footstalks, &c. are beset with star-like specks, and of a rusty colour. Stem low.

REFERENCE TO THE PLATE.

1. The empalement.
2. Seed-bud, chives, and pointal.
3. A chive magnified.
4. The same shown from the outer side.
5. Seed-bud and pointal.

THROUGHOUT almost all the plants as yet introduced from New South Wales, there is a strong marked leading feature that proclaims them of Botany Bay extraction, either in the upright strictness of their habit, a hard harsh character in the foliage, or a rough and rusty exterior. Of the last description is our present figure; but it is nevertheless a very handsome plant, and the only addition (to this otherwise solitary genus) as yet in cultivation with us. Labillardiere, in his Description of New South Wales, has given a figure of a plant under the title of Lasiopetalum triphyllum, very much resembling our quercifolium—probably a variety of it—or, if intended to represent the same plant, there must be a considerable inaccuracy in the delineation. Our figure was taken from a plant at the nursery of Messrs. Colville.

Pelargonium quercifolium

PLATE CCCCLX.

LACHENALIA SESSILIFLORA.

Sessile-flowered Lachenalia.

CLASS VI. ORDER I.

HEXANDRIA MONOGYNIA. Six Chives. One Pointal.

ESSENTIAL GENERIC CHARACTER.

COROLLA 6-petala, infera; petalis 3 interioribus longioribus: stamina erecta: capsula subovata, trialata: semina globosa.

BLOSSOM 6-petaled beneath; the three inner petals the longest: chives erect: capsule nearly egg-shaped, three-winged: seeds globular.

SPECIFIC CHARACTER.

LACHENALIA sessiliflora: foliis geminis, lanceolatis: scapo erecto, semi-pedali: floribus prope apices confertis, purpureis: petalis exterioribus cuneatis: interioribus duplo longioribus, angustis, truncatis.

LACHENALIA with sessile flowers: leaves by pairs: stem upright, half a foot high: flowers grow crowded together near the top, and are of a purple colour: the outer petals are wedge-shaped: the inner ones twice the length, narrow, and appearing cut off at the end.

REFERENCE TO THE PLATE.

1. A flower spread open.
2. The inside of the same.
3. Seed-bud and pointal, summit magnified.

THIS Lachenalia is perfectly new, an attraction that may counterbalance its want of speciosity. From the total absence of footstalks to the flowers we have derived its unoccupied specific title. Professor Jacquin has figured many handsome species of this genus not yet introduced to this country, and amongst the number two equally sessile with our plant, but in no other particular resembling it. From a drawing made for the collection of G. Hibbert, esq. in 1803 our figure was taken; since which period we have not seen any vestige of the plant, and therefore imagine that, like many other Cape bulbs, it is lost to us for the present: but it probably may soon reappear amongst the frequent importations we are in the constant habit of receiving from that inexhaustible botanic mine.

Lachenalia, sessiliflora

PLATE CCCCLXI.

PROTEA TERETIFOLIA.

Cylindric-leaved Protea.

CLASS IV. ORDER I.

TETRANDRIA MONOGYNIA. Four Chives. One Pointal.

ESSENTIAL GENERIC CHARACTER.

COROLLA 4-fida, seu 4-petala. Antheræ lineares, petalis infra apices insertæ. Calyx proprius, nullus. Sem. solitaria.

BLOSSOM four-cleft, or of four petals. Tips linear, inserted into the petals below the points. Cup proper, none. Seeds solitary.

SPECIFIC CHARACTER.

PROTEA teretifolia, foliis obtusis: junioribus adscendentibus, senioribus patentibus: floribus luteis, capitatis, terminalibus, foliis circumsessis: post florescentiam conus formatur.

PROTEA with cylindrical leaves blunt-ended: the younger ascending, and the older ones spreading: flowers yellow, headed, terminal, and surrounded by the leaves: and after flowering a cone is formed.

REFERENCE TO THE PLATE.

1. A flower.
2. A chive magnified.
3. Seed-bud and pointal.
4. Flower-branch of a small variety.

THIS little Protea is more desirable, by way of contrast to those splendid imbricated species, than for any beauty it possesses, and exhibits powerfully the great diversity of character annexed to this numerous genus. Attached to the dissections is part of the branch of a minor variety, and which is by some considered as specifically distinct: and were extension our object, it certainly might be made a separate species, from the difference of its character after flowering, the larger one forming a cone the size of an egg; which the lesser one does not. It also differs in the manner of its growth; but only in the dried specimens which we have seen that have been collected from old plants at the Cape; and in them the small variety forms its branches after the manner of a corymbus, and the plant has thence received the appellation of corymbosa. But had we given a separate figure of it, we could not (without making an awkward apology) have adopted a specific title whose characteristic appearance it might never acquire in this climate, and which our figure would not have possessed. By placing it amongst the variations these objections are obviated, and the appearance of repetition avoided: a desirable object in a genus so extended as Protea; and we shall take every opportunity of abbreviating as much as possible the number of slight varieties, particularly when their attractions are not considerable. Our drawing was made from plants in the Hibbertian collection.

Evelyéia

PLATE CCCCLXII.

MALUS JAPONICA.

Scarlet-flowering Japan Apple.

CLASS XII. ORDER V.

ICOSANDRIA PENTAGYNIA. Twenty Chives. Five Pointals.

GENERIC CHARACTER.

CALYX. Perianthium monophyllum, concavum, quinquefidum, persistens.

COROLLA. Petala quinque, subrotunda, concava.

STAMINA. Filamenta viginti, subulata, corollâ breviora, calyci inserta. Antheræ simplices.

PISTILLUM. Germen inferum. Styli 5. Filum longitudine staminum. Stigmata simplicia.

PERICARPIUM. Pomum subrotundum, umbilicatum, carnosum, membranaceum: loculis quinquelocularibus.

SEMINA. Nonnulla oblonga, obtusa, basi acuminata, hinc convexa, inde plana.

EMPALEMENT. Cup one leaf, hollow, five-parted, and remaining.

BLOSSOM. Five petals, nearly round, and hollow.

CHIVES. Twenty, awl-shaped, and shorter than the blossom, and inserted into the cup. Tips simple.

POINTALS. Seed-bud beneath. Shafts 5. Thread the length of the stamens. Summit simple.

SEED-VESSEL. An apple nearly round, navelled, fleshy, skinny: partitions five loculaments.

SEEDS. Some oblong, obtuse, pointed at the base, convex on the side, and then flat.

SPECIFIC CHARACTER.

MALUS japonica, foliis alternis, lanceolatis et spathulatis, glabris, et lucidis: marginibus serrulatis, suffruticibus, et interdum arborescentibus. Rami et ramuli alterni, recti, ad basin nodosi, colore schisti: floribus fasciculatis, plerumque quaternis, læte coccineis: petalis concavis, quinque vel decem. Floret in Martio et Aprili.

JAPAN Apple, with alternate leaves lance- and spathula-shaped, smooth, and shining: with finely sawed margins, shrubbyish, and sometimes growing to a tree. The small and large branches are alternate and straight out, knotty at the base, and of a slaty colour. Flowers grow in bunches mostly of four together, of a bright scarlet colour. The petals are concave, and from five to ten in number. Flowers in March and April.

REFERENCE TO THE PLATE.

1. A petal.
2. The empalement, chives, and pointals.
3. The same spread open, one tip magnified.
4. Seed-bud and pointals, summit magnified.

THIS handsome fruit-tree will doubtless soon become an object of general cultivation in this country, from the brilliance and duration of its fine scarlet blossoms. It is perfectly hardy, but flowers with most freedom in the shelter of the green-house. The fruit is about the size and shape of a walnut. Why or wherefore Pyrus is the generic title adopted for Apple we were at first at a loss to conjecture, but upon investigation find it built on the egotism too inseparable from human nature, and must confess ourselves very sorry to be under the necessity of placing the defect to its original source; the celebrated Linnæus, who it appears altered it from Malus (the genus of Tournefort) to Pyrus, for no other reason but that his own system (unquestionably the best in almost every other particular) might not bear any resemblance to that of Tournefort. Jussieu in the Introduction to his Genera Plantarum, commenting on this very subject, concludes with this most excellent remark: "Such is the love of undivided praise!" We have therefore returned the genus back to its old standard, not through any desire to alter, but absolute necessity; regarding the absurdity of its nomination under the generic title of Pyrus as already too long retained; for whilst the tree is known by its fruit, that fruit should certainly be called by its name.

For the introduction of this fine plant we are indebted to the Hon. C. Greville, in whose conservatory at Paddington it first flowered, and from whence our figure was taken.

Pl. 68

Camellia Japonica

PLATE CCCCLXIII.

PÆONIA PAPAVERACEA.

Poppy-like Pæony.

CLASS XIII. ORDER VI.

POLYANDRIA HEXAGYNIA. Many Chives. Six Pointals.

ESSENTIAL GENERIC CHARACTER.

CALYX 5-phyllus. Petala 5. Styli 0. Capsulæ polyspermæ.

CUP 5-leaved. Petals 5. Pointal none. Capsules many-seeded.

SPECIFIC CHARACTER.

PÆONIA caule suffruticoso ramoso: folia alternatim bipinnata, subtus glauca: petiolis longis, canaliculatis, amplexicaulibus: floribus semi-duplicibus, albis, ad basin eleganter purpureo radiatis: capsula orbiculata, continens sex loculamenta, in quibus singulis sunt duo semina.

PÆONY with a shrubby stem branching beneath: leaves alternately two-winged, and glaucous beneath, with long footstalks, channelled, and embracing the stem. Flowers semi-double, white, but elegantly radiated at the base with a purple colour: capsule orbicular, containing six cells, with two seeds in each.

REFERENCE TO THE PLATE.

1. The seed-vessel.
2. The same cut transversely.

FOR this beautiful species of Pæonia we are indebted to Lady Hume, in whose select collection at Wormley-bury, Herts, it flowered for the first time in this country. When we figured the fine purple variety, we little thought of having so soon to compare it with a rival of such magnitude, and of equal beauty. The bright radiated purple at the base is a great relief to the surrounding whiteness of the petals, that would otherwise stand in much greater need of the assistance of art for a strength of shadow, that would unavoidably injure their delicacy. The more we become acquainted with this attractive genus, the greater latitude of growth we find attached to it, which appears to defy all systematic rule, varying in some species from Digynia, or two pointals, up to six or more. The present one differs more than all the rest, having six pointals and seed-buds attached together, and enshrined within a globular exterior, resembling a Poppy, and from whence we have drawn its specific title; for, as a distinct species it may certainly be considered with great propriety; and most likely the distinction will by some be thought of sufficient consequence to license a generic division: but in a genus so mutable, were the alteration still greater, whilst it could be recognised as a Pæony, we should regret to meet it under any other title.

Paeonia papaveracea

PLATE CCCCLXIV.

DIOSMA OVATA.

Oval-leaved Diosma.

CLASS V. ORDER I.

PENTANDRIA MONOGYNIA. Five Chives. One Pointal.

ESSENTIAL GENERIC CHARACTER.

COROLLA 5-petala. Nectaria 5 supra germen. Caps. 3. s. 5, coalitæ. Semina tecta.	BLOSSOM. Five petals. Five nectaries above the seed-bud. Seed-vessels 3 or 5, joined together. Seeds covered.

SPECIFIC CHARACTER.

DIOSMA ovata, foliis alternis, oppositis, odoris, supra glabris, infra punctatis, patentibus: floribus plerumque duobus, axillaribus, in medio ramulorum, albis. Caulis erectus: ramis simplicibus.	DIOSMA with oval leaves, alternate, opposite, and full of scent, smooth above, dotted beneath, and spreading. Flowers grow mostly two together from the axillæ of the leaves, about the middle of the branches, and are white. Stem upright. Branches simple.

REFERENCE TO THE PLATE.

1. The empalement.
2. Seed-buds, honey-cups, chives, and pointal.
3. A petal.
4. A chive magnified.
5. Seed-bud and pointal.

AMONG the scented foliage characteristic of so many of the Diosmas the present species is by far the most powerful, and is the plant called Buku, so much used by the Hottentots, at the Cape of Good Hope, by way of perfume. They mix it with grease, and anoint themselves with it so profusely that a stranger can scarcely endure the effluvia of it. The D. serrata also possesses a similar scent, and is most likely used occasionally for the same purpose by the natives. Its scent, when rubbed, remains a long time, and by some is thought very pleasant, by others as disagreeable: a difference of opinion in general attending all very strong perfumes. The foliage has a very neat appearance, and the clear white flowers give it a lively aspect. Like several others of the genus, it blooms in winter and spring. Our figure was made from the Clapham collection.

mala

PLATE CCCCLXV.

PROTEA DIVARICATA.

Straddling-leaved Protea.

CLASS IV. ORDER I.

TETRANDRIA MONOGYNIA. Four Chives. One Pointal.

ESSENTIAL GENERIC CHARACTER.

Corolla 4-fida, seu 4-petala. Antheræ lineares, petalis infra apices insertæ. Calyx proprius, nullus. Sem. solitaria.	Blossom four-cleft, or of four petals. Tips linear, inserted into the petals below the points. Cup proper, none. Seeds solitary.

SPECIFIC CHARACTER.

Protea divaricata, foliis multifidis, longis, linearibus, teretibus, patentibus: floribus glomeratis, luteis.	Protea with straddling leaves, many-cleft, long, linear, round, and spreading. Flowers grow in close round heads of a yellow colour.

REFERENCE TO THE PLATE.

1. A flower.
2. A chive magnified.
3. Seed-bud and pointal.

This very distinct species of Protea we have not seen in any other collection than that of G. Hibbert, esq. nor is it as yet amongst the numerous fine dried specimens in the herbarium of A. B. Lambert, esq. and certainly may be considered at present as a rare plant. From the firm luxuriance of the foliage, and woody character of its stem, we should be inclined to regard it as a plant not difficult to preserve; and considering the abundance of its leaves, the flowers are comparatively few: and very likely this circumstance may best account for its present scarcity; for, amongst the various beauties of this extensive tribe, numerous flowers, or speciosity of appearance, are the best recommendations to particular attention.

Protea dracunculata

PLATE CCCCLXVI.

GOODENIA TENELLA.

Slender Goodenia.

CLASS V. ORDER I.

PENTANDRIA MONOGYNIA. Five Chives. One Pointal.

ESSENTIAL GENERIC CHARACTER.

COROLLA 5-fida, supra longitudinaliter fissa, genitalia exserens. Stigma urceolatum, ciliatum.

BLOSSOM five-cleft, longitudinally cloven on the upper side, exposing the organs of generation. Summit cup-shaped, and fringed.

SPECIFIC CHARACTER.

GOODENIA tenella, foliis prostratis, spathulatis, margine leviter pilosis. Flores plures, germinantes a duabus bracteis oppositis: corollis luteis: petalis duobus superioribus maculatis. Rami graciles, longi, emergentes a radice, terram comprimunt, et postea adscendunt.

GOODENIA with slender stems, prostrate leaves which are spathula-shaped, with lightly haired margins. Flowers numerous, branching out from two opposite floral leaves. Blossoms yellow: the two upper petals are spotted. Branches slender, long, and emerging from the root, press the earth, and afterward ascend.

REFERENCE TO THE PLATE.

1. The empalement.
2. A blossom spread open.
3. Seed-bud, chives, and pointal, magnified.

THIS delicate new Goodenia represents the entire plant, as communicated to the author by the Comtesse de Vandes, in whose choice collection near Bayswater it flowered for the first time. It is certainly one of the most graceful plants hitherto introduced from New South Wales. Its general exterior approaches very near a generic division of Goodénia called Velleia, and is by Labillardiere figured under the title of Velleia trinervis. The abundance and succession of its bright yellow blossom, joined to its light and airy appearance, will no doubt insure it a place in most collections.

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Linnaea borealis

PLATE CCCCLXVII.

LYTHRUM FRUTICOSUM.

Shrubby Lythrum.

CLASS XII. ORDER I.

DODECANDRIA MONOGYNIA. Twelve Chives. One Pointal.

GENERIC CHARACTER.

CALYX. Perianthium monophyllum, cylindraceum: denticulis duodecim, alternis minoribus.

COROLLA. Petala sex, oblonga, obtusiuscula, patentia: unguibus in incisuras calycis insertis.

STAMINA. Filamenta 12, longitudine calycis, supra: infra breviora. Antheræ simplices, incumbentes.

PISTILLUM. Germen oblongum. Stylus subulatus, longitudine staminum, declinatus. Stigma orbiculatum.

PERICARPIUM. Capsula oblonga, acuminata, loculamentis duobus tecta.

SEMINA numerosa, parva.

EMPALEMENT. Cup one-leaved, cylindrical, twelve-toothed: the alternate ones the smallest.

BLOSSOM. Petals six, oblong, bluntish, and spreading: the ungues or claws are inserted into the divisions of the calyx.

CHIVES 12 filaments the length of the calyx, above, shorter beneath. Tips simple, and lying on them.

POINTAL. Seed-bud oblong. Shaft awl-shaped, the length of the stamens, bent downward. Summit orbicular.

SEED-VESSEL. Capsule oblong, sharp-pointed, covered with two loculaments.

SEEDS numerous, and small.

SPECIFIC CHARACTER.

LYTHRUM fruticosum: foliis oppositis, alternis, lanceolatis. Flores in racemis axillaribus in numeris irregularibus: corollis tubæformibus, coccineis. Sponte nascens in provinciis borealibus Hindostani.

LYTHRUM with a shrubby stem. Leaves opposite, alternate, and lance-shaped. Flowers grow in clusters from the axillæ of the leaves in irregular numbers. Blossoms trumpet-shaped, of a scarlet colour. It grows wild in the northern provinces of Hindostan.

REFERENCE TO THE PLATE.

1. A blossom spread open, one tip magnified.
2. The same shown from the outer side.
3. The seed-bud and pointal.
4. A capsule.
5. The same cut transverse.

THIS plant seems to have been hitherto but imperfectly known, having been figured among Dr. Roxburgh's Coromandel Plants, vol. i. p. 20, under the title of Grislea tomentosa. It has recently received another new generic title; but upon examination we find it to be the Lythrum of Linnæus; in which opinion the author is sanctioned by the concurrence of some of the ablest botanists of the present day. This handsome shrub is described in the 4th vol. of the Asiatic Researches, under the native title of D.hawry, and is said to grow wild on the hills and banks of rivulets in the northern part of Hindostan, where it is as much esteemed for its utility as its beautiful red flowers, which are gathered both for the use of dyers and apothecaries; the latter giving an infusion of them as a cooling medicine. When used in dyeing, they lose their colour, and only yield a slight brownish tincture to the water; so that the benefit derived from them when used with * Aal seems to depend solely on their action as an astringent, and which appears to be confirmed by the substituting of † Purwas, a strong astringent, as an equivalent for the flowers of the D.hawry. It is at present treated as a hot-house plant, but would in all probability succeed very well in the careful treatment of the green-house. The figure was taken from a fine plant in the nursery of Messrs. Colville.

* Aal, the native name of the Morinda plant, a tree of a middling size cultivated to a great extent for the purpose of dyeing cloth red, and is more esteemed for its duration than its beauty, and forms an important branch in the commerce of the province of Mâlava.

† Purwas, a kind of gall nut containing the exuviæ of a small insect found on a species of Mimosa.

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PLATE CCCCLXVIII.

ALOE ARBORESCENS.

Tree Aloe.

CLASS VI. ORDER I.

HEXANDRIA MONOGYNIA. Six Chives. One Pointal.

GENERIC CHARACTER.

CALYX nullus.

COROLLA. Monopetala, erecta, sexfida, oblonga. Tubus gibbus. Limbi patuli, parvi, fundo nectarifero.

STAMINA. Filamenta sex, subulata, longitudine corollæ, fere ultra, receptaculo inserta. Antheræ oblongæ, incumbentes.

PISTILLUM. Germen ovatum. Stylus simplex, longitudine staminum. Stigma obtusum, trifidum.

PERICARPIUM. Capsula oblonga, trisulca, trilocularis, trivalvis.

SEMINA plura, angulata.

OBS. A. variegata sola habet stigma et stamina declinata.

EMPALEMENT none.

BLOSSOM. One petal, upright, six-cleft, oblong. Tube gouty. Limbs spreading and small, with honey at their base.

CHIVES. Threads six, awl-shaped, the length of the blossom, and scarcely above it, inserted into the receptacle. Anthers oblong, and incumbent.

POINTAL. Seed-bud ovate. Shaft simple, the length of the stamens. Summit obtuse, and three-sided.

SEED-VESSEL. Capsule oblong, 3-furrowed, 3-celled, 3-valved.

SEEDS many and angular.

OBS. A. variegata simply has the pointal and stamens bent downwards.

SPECIFIC CHARACTER.

ALOE arborescens: floribus spicatis rubescentibus, apice viridibus: foliis porrectis, lanceolatis, carneis, apice recurvatis, marginibus serratis: caule ad basin nudo, superne foliis circumsesso.

ALOE with a tree-like stem. Flowers grow in spikes of a soft red colour, green at the ends. Leaves straight out, lance-shaped, fleshy, and recurved, with sawed margins. Stem naked at the base, surrounded by the leaves on the upper part.

REFERENCE TO THE PLATE.

1. A leaf.
2. A flower spread open.
3. Seed-bud and pointal.
4. Miniature representation of the plant.

THIS fine tall plant has been but rarely seen in bloom near town. The specimen from which our figure was made, was sent to London by the Rev. George Reading Leathes, from his collection at Bury St. Edmund's, to his friend sir T. G. Cullum, bart. and obligingly communicated to us by that gentleman. It grows twelve feet high, and is considered as one of the lottiest of the Aloe tribe (the dichotoma and ferox excepted), the former of which is said to arrive sometimes to the enormous height of twelve feet in circumference round the stem, twenty feet high, and four hundred round the extremity of the branches. Colonel Paterson, in his Travels in Africa, mentions, that after crossing the Cousie or Sand River he visited a European and his family, who with their cattle had no other tenement but what nature had furnished them with in the Aloe dichotoma.

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PLATE CCCCLXIX.

PROTEA CORONATA.

Crown-flowered Protea.

CLASS IV. ORDER I.

TETRANDRIA MONOGYNIA. Four Chives. One Pointal.

ESSENTIAL GENERIC CHARACTER.

COROLLA 4-fida, seu 4-petala. Antheræ lineares, petalis infra apices insertæ. Calyx proprius, nullus. Sem. solitaria.

BLOSSOM four-cleft, or of four petals. Tips linear, inserted into the petals below the points. Cup proper, none. Seeds solitary.

SPECIFIC CHARACTER.

PROTEA foliis lanceolatis, obliquis, transverse et horizontaliter sitis, marginibus tomentosis: squamis calycinis superioribus spathulatis, angustis, tomentosis, margine piloso, incarnatis: squamis infra lato-ovatis, tomentosis, intus melliferis: caulis erectus, sesquipedalis.

PROTEA with lance-shaped oblique leaves standing sideways in a horizontal direction, with downy edges. The upper scales of the empalement are spathula-shaped, narrow, downy, with hairy edges, and flesh-coloured. The scales beneath are broadly ovate, downy, and furnished with honey on the inner side. Stem upright, a foot and a half high.

REFERENCE TO THE PLATE.

1. A flower complete.
2. Seed-bud and pointal.

THIS Protea may be regarded as an intermediate character between the P. mellifera and that fine section of Protea called speciosa; and certainly, in point of beauty, deserves to be ranked among that showy division: but as the principal leading feature in the Speciosas exists in the powerful feathery fringe upon the edges of the imbrication, and the present one possessing so very slight a characteristic of that description, we could not with propriety rank it amongst them. Its affinity to the P. mellifera is only in the honey-bearing character of its flowers, which, like that species, contain a quantity of nectariferous juice. The unoccupied term of coronata is adopted, from the resemblance its imbrication bears to the form of a crown, and which is more apparent in this species than in any other as yet in cultivation with us. Our figure was made from the Clapham collection.

Plate 6

Protea coronata

PLATE CCCCLXX.

OPHRYS ARACHNOIDES.

Spider-like Ophrys.

CLASS XX. ORDER I.

GYNANDRIA DIANDRIA. Chives on the Pointal. Two Chives.

ESSENTIAL GENERIC CHARACTER.

Corolla 5 petala, sub-ringens: petalis patentibus: labellum nectarii e basi styli, patens. Antheræ duæ, terminales, adnatæ.

Blossom 5 petals, nearly gaping: petals spreading: the lip of the honey-cup comes from the base of the shaft, spreading. Chives two, terminal, and close together.

SPECIFIC CHARACTER.

Ophrys arachnoides, caule folioso: foliis lanceolatis, glauco-viridibus, striatis: corollis patentibus, sub-albis; tribus exterioribus obtusis; duabus interioribus acutis, brevissimis: labello nectarii magno, subrotundo, fusco, convexo, villoso: prope basin labelli duæ sunt appendiculæ oppositæ, flavæ: centrum nectarii interlineatum est, maculisque flavis notatum: et in medio marginis tuberculum carnosum.

Ophrys with spider-like flowers: leaves enfoliating the stem, lance-shaped, of a glaucous green and striped. Blossom spreading, and nearly white: the three outer ones are obtuse, the two inner ones pointed, and very small: the lip of the honey-cup is large, nearly round, brown, convex, and hairy: near the base of the nectary there are two opposite appendicles of a yellow colour: the centre of the honey-cup is interlined, and spotted with yellow; and in the centre of the margin there is a fleshy substance.

REFERENCE TO THE PLATE.

1. The blossom.
2. The same shown from the outside.
3. The honey-cup.
4. Chives and pointal, magnified.

This interesting species of the Orchideæ family was sent from Switzerland, by Dr. Messear, to the gardens of Isaac Swainson, esq. at Twickenham, where it flowers annually. It is said to be a native of Britain, France, Portugal, &c. and is known by the appellation of Ophrys arachnoides, or spider-like, but is generally thought to bear a stronger analogy to the humble bee. In the Flora Londinensis of Curtis, there is a figure under the title of Ophrys fuciflora very much resembling our plant in most particulars, except in the colour of the flower, which is very different. The same plant is again figured in Dr. Smith's English Botany, under the specific of aranifera; and thus the plant is known both as a spider and a drone. The arachnoides may therefore be considered, if not a distinct species, as a very strong marked variety, and is at present a scarce plant. It remains so long in bloom, that the author observed it at the nursery of Messrs. Whitley and Brames, three weeks after he had made the drawing, nearly as perfect as the figure represents.

Orchis maderensis

PLATE CCCCLXXI.

OPHRYS MYODES.

Fly-like Ophrys.

CLASS XX. ORDER I.

GYNANDRIA DIANDRIA. Chives on the Pointal. Two Chives.

ESSENTIAL GENERIC CHARACTER.

COROLLA 5 petala, sub-ringens: petalis patentibus: labellum nectarii e basi styli, patens. Antheræ duæ, terminales, adnatæ.

BLOSSOM 5 petals, nearly gaping: petals spreading: the lip of the honey-cup comes from the base of the shaft, spreading. Chives two, terminal, and close together.

SPECIFIC CHARACTER.

OPHRYS myodes, floribus alternis, lateralibus: nectarii labio tripartito: laciniis lateralibus: lineari-lanceolatis, media oblonga, biloba, longior lateralibus: petalis patentibus: tribus exterioribus lanceolatis, viridibus, obtusis: duobus interioribus linearibus, brevissimis, purpureis: caule folioso: bulbo subrotundo.

OPHRYS with fly-like flowers, alternate, and lateral: the lip of the honey-cup is three-cleft: the side segments are linear, and lance-shaped: the middle one is oblong, two-lobed, and longer than the side ones: the petals are spreading: the three outer ones are lance-shaped, green, and obtuse, the two inner ones are linear, very short, and purple: leaves enfoliating the stem: bulb roundish.

REFERENCE TO THE PLATE.

1. The blossom.
2. The same shown from the outer side.
3. The honey-cup.
4. The same shown from the under side.
5. Chives and pointal, magnified.

AMONGST the Alpine plants of G. Hibbert, esq. we met with this curious little insectiferous plant, and which, like the preceding figure, is said to be indigenous to almost all Europe. It is figured in the English Botany of Dr. Smith, but apparently from a taller plant, and differs in the colour of the body. It is also represented in the Botanical Magazine, of a higher stature, but nearly the same in colour. Variations probably the mere effect of climate, and a different mode of culture. As they all bear an unequivocal resemblance to the fly, so exact a representation of ever so humble a species of animated nature will no doubt be always thought deserving a place in every collection.

Ophrys. myodes

PLATE CCCCLXXII.

HIBBERTIA CRENATA.

Scolloped-leaved Hibbertia.

CLASS XIII. ORDER X.

POLYANDRIA DECAGYNIA. Many Chives. Ten Pointals.

ESSENTIAL GENERIC CHARACTER.

CALYX 5-phyllus. Petala 5. Stamina numerosa, receptaculo inserta. Germina quinque vel decem, desinentia in stylis, oligosperma.

EMPALEMENT 5-leaved. Five petals. Chives numerous, inserted into the receptacle. Seed-buds 5 or 10, terminating in shafts, few-seeded.

SPECIFIC CHARACTER.

HIBBERTIA foliis crenatis, sub-cordatis: floribus solitariis, axillaribus, luteis, patentibus. Caulis fruticosus: ramis patentibus, numerosis, purpureis.

HIBBERTIA with scolloped leaves nearly heart-shaped. Flowers grow singly from the insertion of the leaves, are of a yellow colour, and spreading. Stem shrubby. Branches spreading, numerous, and purple.

REFERENCE TO THE PLATE.

1. The empalement.
2. A petal.
3. Chives and pointals.
4. Seed-buds and pointals.
5. A seed-bud and pointal, magnified.

THIS is an addition to the genus Hibbertia, but differs from the H. volubilis in having ten pointals instead of five; and will most likely, when more of the genus are in cultivation with us, form a section under the title of decagynia, and the original of the genus as pentagynia: a mode frequently adopted, to prevent that confusion too often attending the formation of new genera. Under this arrangement the genus of Hibbertia will be considerably enlarged, and certainly no genus more deserves it than that which bears the name of such a liberal promoter of botanic science.

Our figure represents the entire plant, from the nursery of Messrs. Colville, where it was first raised from seeds received from New South Wales.

PLATE CCCCLXXIII.

YUCCA GLORIOSA.

Superb Yucca.

CLASS VI. ORDER I.

HEXANDRIA MONOGYNIA. Six Chives. One Pointal.

GENERIC CHARACTER.

CALYX nullus.

COROLLA campanulata, sex-partita, unguibus cohærens: laciniis ovatis, maximis, patentibus.

STAMINA. Filamenta sex, brevissima, superne crassiora, reflexa. Antheræ minimæ.

PISTILLUM. Germen oblongum, obtusum, triquetrum, staminibus longius. Stylus nullus. Stigma trisulcum, obtusum: laciniis bifidis, perviis.

PERICARPIUM. Capsula oblonga, obtusa, triangularis, trilocularis, trivalvis.

SEMINA plurima, gemino ordine incumbentia.

EMPALEMENT none.

BLOSSOM bell-shaped, six-divided, fastened together by the claws. The segments ovate, large, and spreading.

CHIVES. Six threads, very short, thick above, and reflexed. Tips small.

POINTAL. Seed-bud oblong, blunt, three-sided, longer than the chives. Shaft none. Summit three-furrowed, obtuse. The segments are bifid, and may be passed through.

SEED-VESSEL. Capsule oblong, obtuse, three-angled, three-celled, three-valved.

SEEDS many, two-ranked, lying on each other.

SPECIFIC CHARACTER.

YUCCA floribunda, ramosa, patens: corollis campanulatis, pendulis: foliis ensiformibus, plicatis, apice mucronato.

ADAM'S NEEDLE, with numerous flowers, branching and spreading: blossoms bell-shaped, and hanging down. Leaves sword-shaped and plaited, with a mucronated point.

Habitat in America boreali.

Native of North America.

REFERENCE TO THE PLATE.

1. The end of a leaf.
2. The plant in miniature.
3. The chives and pointal.
4. Seed-bud and pointal.
5. The seed-bud cut transversely.

OF this genus of plants there are as yet known but four species. The present one, from its specific title, might naturally be supposed to possess a magnificent exterior of unrivalled beauty; which is by no means the case: for although it is a grand plant when in fine bloom, the term of gloriosa must certainly be regarded as a metaphysical hyperbole, very inapplicable to any plant ever so beautiful. It is indigenous to North America, and of great utility to the natives, who make cords from the stringy texture of the leaves, and use it in the fabrication of their houses, to fasten the ends of them together. Their swinging beds, called Hamacks, are also said to be made of the same materials; and most probably the sailor's bed, so well known by the appellation of Hammock, derives its title from the Hamack of the Indians. It is easily increased from the young shoots, which become flowering plants in about five years in the open ground: but if kept in the green-house, it might remain for twenty years without blooming, for want of sufficient air and sun to bring it to maturity.

Our figure was made from a plant ten feet high, in luxuriant bloom, at Hedsor Lodge, the seat of Lord Boston.

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PLATE CCCCLXXIV.

PSORALEA PINNATA.

Winged-leaved Psoralea.

CLASS XVII. ORDER IV.

DIADELPHIA DECANDRIA. Two Brotherhoods. Ten Chives.

ESSENTIAL GENERIC CHARACTER.

Calyx longitudine leguminis. Stamina diadelpha. Legumen monospermum, sub-rostratum, evalve.

Empalement the length of the pod. Chives diadelphous. Pod one-seeded, beaked, and valveless.

SPECIFIC CHARACTER.

Psoralea pinnata, foliis patentibus apice acutis, recurvatis: floribus axillaribus, pedunculis longis.

Psoralea with winged leaves, spreading, sharp-pointed, and recurved. The flowers grow from the axillæ of the leaves upon long footstalks.

REFERENCE TO THE PLATE.

1. The empalement.
2. The standard of the blossom.
3. One of the wings.
4. One of the same shown from the inside.
5. The chives.
6. The seed-bud and pointal.

The Psoralea pinnata is a very ornamental plant for the conservatory, and certainly deserves a coloured representation. At present there are only two uncoloured engravings of it extant: one in the Flora tetrapetala of Rivinus, No. 5.; the other in Hermann's Hortus Lugdunensis, tab. 273. The Psoraleas are a well marked natural genus, and appear much more characteristic of each other than many of the Papilonaceous genera.

Our drawing was made from a fine specimen received from the collection of the Hon. W. Irby.

Tab. 47.

PLATE CCCCLXXV.

SERAPIAS CORDIGERA.

Heart-bearing Serapias.

CLASS XX. ORDER I.

GYNANDRIA DIANDRIA. Chives on the Pointal. Two Chives.

ESSENTIAL GENERIC CHARACTER.

COROLLA 5 petala, ringens: petalis conniventibus: labello nectarii ecalcarato: lamina deflexa: antheræ styli longitudine, adnatæ.

BLOSSOM 5 petals, gaping: petals approaching together. The lip of the honey-cup growing from the spur: the lip bending downwards. The chives the length of the style, and attached to it.

SPECIFIC CHARACTER.

SERAPIAS foliis lanceolatis glaucis, ad basin maculatis. Nectarium tripartitum, ferrugineum: laciniis lateralibus obtusis, erectis, conniventibus: divisio media ovata, acuminata, pilosa, dependens: corollis implicatis, apice involutis, extus pallentibus, intus fusco purpurascentibus.

SERAPIAS with lance-shaped glaucous leaves spotted at the base. Honey-cup three-divided, and of a rusty colour: the side segments obtuse, upright, and approaching: the middle division is ovate, sharp-pointed, hairy, and hanging down. Blossom folded together, and turned inwards at the point, pale-coloured on the outside, and of a purply brown on the inside.

REFERENCE TO THE PLATE.

1. The flower spread open.
2. The lip of the honey-cup.
3. The chives and pointal, with the spur of the honey-cup, magnified.

FOR this luxuriant specimen of the Serapias cordigera we are indebted to the Right Hon. the Marquis of Blandford. It is a rare plant, of a curious structure but very sombre aspect. It is one of those numerous divisions of the class Gynandria approaching the genus Ophrys on the one side, and Neottia on the other. From the Ophrys it is not easily distinguished; but from Neottia it is separated by the difference of its habit. This plant is well known by the title of cordigera, a specific derived from the resemblance the lip of the nectarium is supposed to bear to the shape of a heart: but the analogy is certainly not very powerful. The flowers remain a considerable time in perfection. It is indigenous to Spain, Barbary, Italy, &c.

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Cypripedium cordigerum

PLATE CCCCLXXVI.

MELALEUCA DIOSMÆFOLIA.

Diosma-leaved Melaleuca.

CLASS XVIII. ORDER IV.

POLYADELPHIA POLYANDRIA. Threads in many Sets. Many Chives.

ESSENTIAL GENERIC CHARACTER.

CALYX quinquefidus, semisuperus. Petala quinque. Filamenta multa, longissima, in quinque corpora connata. Pistillum unum. Capsula 3-locularis.

CUP five-cleft, half above. Petals five. Threads numerous, very long, united into five bodies. Pointal one. Capsule 3-celled.

See Melaleuca Ericæfolia, Pl. 175. Vol. III.

SPECIFIC CHARACTER.

MELALEUCA foliis alternatis, ovatis, reflexis, subtus punctatis, odoratis: floribus sessilibus in medio ramorum, viridibus, confertis: ramis verticillatis, patentibus.

MELALEUCA with alternate leaves, ovate, and reflexed, punctured beneath, and sweet-scented. Flowers sessile about the middle of the branches, are of a green colour, and crowded together. The branches are whorled, and spreading.

REFERENCE TO THE PLATE.

1. A flower complete.
2. A flower spread open, without the empalement.
3. One of the five bundles of chives.
4. Empalement, seed-bud, and pointal, summit magnified.
5. A ripe seed-vessel.

THIS perfectly new species of Melaleuca was sent to us by Mr. J. Milne, botanic gardener at Fonthill, who is very successful in the cultivation of new plants. The punctured or dotted character on the under side of the leaves gives it an affinity to the Diosma tribe, as does also its scented foliage, which when rubbed emits a grateful aromatic odour; and which the leaves retain in some degree when dried. The flowers, although not splendid, are perhaps equally estimable from the rarity of their colour, which is a bright green when in perfection; but in retiring they acquire a yellower tint. It is a native of New Holland, and requires the careful treatment of the green-house.

PLATE CCCCLXXVII.

LINUM VENUSTUM.

Graceful Linum.

CLASS V. ORDER V.

PENTANDRIA PENTAGYNIA. Five Chives. Five Pointals.

ESSENTIAL GENERIC CHARACTER.

CALYX 5-phyllus. Petala 5-phylla. Capsula 5-valvis, 10-locularis. Semina solitaria.	EMPALEMENT 5-leaved. Petals 5-leaved. Capsule 5-valved. 10 Loculaments. Seeds solitary.

SPECIFIC CHARACTER.

LINUM foliis ovatis, acutis, 5—7-nervosis, margine pilosa: floribus in umbellis paniculatis: ramis alternis: corollis magnis, patentibus, incarnatis. Caulis erectus, pedalis.	LINUM with ovate sharp-pointed leaves. Nerves from 5 to 7, and hairy at the edges. Flowers grow in paniculated umbels. Branches alternate. Blossom large, spreading, and flesh-coloured. Branches upright, a foot high.
Nascens in Monte Caucaso.	Native of Mount Caucasus.

THIS fine new Linum was raised from seed by Mr. J. Bell, in whose garden near Brentford it has flowered for the first time in England. It is nearest in affinity to the L. hirsutum of Jacquin, under which specific title the seed was received by Mr. Bell. The flowers when dead or dried lose their fine pinky tint, and acquire a blueish colour, the same as it first appears with in the bud state. It might then compare with Jacquin's figure in point of colour, but would be too far removed in its appearance for us to have adopted the specific of hirsutum with any propriety. We may therefore with justice regard it as a beautiful nondescript species. It is a native of Mount Caucasus, flowers in June and July, and seeds so freely that it will no doubt be soon abundantly cultivated.

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PLATE CCCCLXXVIII.

CRINUM LATIFOLIUM.

Broad-leaved Crinum.

CLASS VI. ORDER I.

HEXANDRIA MONOGYNIA. Six Chives. One Pointal.

ESSENTIAL GENERIC CHARACTER.

Corolla supra, infundibuliformis, sexpartita, æqualis: filamenta fauci tubi inserta: semina ad basin corollarum, vivipara.

Blossom above, funnel-shaped, six-parted, equal: threads inserted into the mouth of the tube: seeds at the base of the blossoms, viviparous.

SPECIFIC CHARACTER.

Crinum latifolium, undulatum, glabrum, lucidum: spatha multiflora: tubo corollæ laciniis longiore, quæ mucronatæ sunt: post florescentiam capsula crescit in bulbum magnum, et plantam format futuram.

Habitat in Indiæ orientalis arenosis.

Crinum with broad, waved, smooth, shining leaves: sheath many-flowered: the tube of the blossom longer than the segments, which are pointed: and after flowering, the capsule swells into a large bulb, and forms the future plant.

Native of the sandy parts of the East Indies.

REFERENCE TO THE PLATE.

1. A leaf.
2. The plant in miniature.
3. The chives, as attached to the tube of the flower.
4. Seed-bud and pointal.
5. The seed-bud, or bulb, inflated, as it appears after flowering.
6. The same stripped of its outer covering.

The Crinum latifolium is certainly one of the most attractive of the genus, as, in addition to the fine red colour of its flowers, it possesses an aromatic odour of agreeable fragrance. It is a bulb-bearer, as are all of this genus, although several of them have been placed erroneously amongst the genus Amaryllis, which does not bear bulbs. The genus Crinum, at present a short one, will therefore, with a good grace, admit a few additions; whilst that of Amaryllis, already very extended, will receive no injury by a slight curtailment. It is a native of the dry sandy parts of the East Indies, and was introduced by Mr. Lambert in the year 1803, but has not flowered till this summer—a period of four years. But there is little doubt of its now blooming annually, as it is not uncommon for bulbs imported from a great distance to enjoy a state of quiescence after their arrival. Our figure was made from a fine plant in luxuriant bloom in the hot-stove of J. Vere, esq.

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PLATE CCCCLXXIX.

FRAGARIA INDICA.

Indian Strawberry.

CLASS XXII. ORDER V.

ICOSANDRIA POLYGYNIA. Twenty Chives. Many Pointals.

GENERIC CHARACTER.

CALYX. Perianthium monophyllum, planum, decemfidum: laciniis alternatim exterioribus, angustioribus.

COROLLA. Petala quinque, subrotunda, patentia, calyci inserta.

STAMINA. Filamenta viginti, subulata, corolla breviora, calyci inserta. Antheræ lunulares.

PISTILLUM. Germina numerosa, minima, in capitulum collecta. Styli simplices, latere germinis inserti. Stigmata simplicia.

PERICARPIUM nullum. Bacca fit receptaculum commune seminum, rotundo-ovata, pulposa, mollis, magna, colorata, basi truncata, decidua.

SEMINA numerosa, minima, per superficiem receptaculi sparsa.

EMPALEMENT. Cup one-leafed, flat, ten-cleft: the segments are alternately exterior, and narrowed.

BLOSSOM five-petalled, nearly round, spreading, and inserted into the calyx.

CHIVES. Threads twenty, awl-shaped, shorter than the blossom, inserted into the calyx. Tips like a half-moon.

POINTAL. Seed-buds numerous and small, collected into a head. Shaft simple, inserted into the side of the germ. Summit simple.

SEED-VESSEL none. The berry becomes the common receptacle for the seeds, is of a round ovate form, pulpy, soft, large, and coloured, cut off at the base, and deciduous.

SEEDS numerous, small, on the outside of the receptacle, scattered.

SPECIFIC CHARACTER.

FRAGARIA foliis tripartitis: foliolis ovatis, acutis, crenatis: petiolis longis: calyce decemfido, inferne piloso: quinque exterioribus rotundatis, crenatis: interioribus ovatis, acutis: pedunculis longis: floribus luteis: fructu rubro, insipido. Rami pilosi, repentes.

STRAWBERRY with three-divided leaves: leaflets ovate, pointed, and scolloped: footstalks long: empalement ten-cleft, and hairy beneath: the five outer ones are rounded and notched: the inner ones are ovate, and pointed: peduncles long: flowers yellow: fruit red and insipid. Branches hairy, and creeping.

REFERENCE TO THE PLATE.

1. The empalement, seed-buds, chives, and pointals.
2. The same shown from the under side.
3. A petal.
4. Seed-buds, chives, and pointals.
5. A seed-bud and pointal.
6. The same magnified.
7. A seed-bud from the ripe fruit.
8. The same magnified.

THIS new species of Fragaria, from the lively yellow flowers and brilliance of its fine red fruit, is desirable as an ornamental plant, but is in no other respect estimable, from the insipidity of its fruit, which is entirely destitute of flavour. It is a native of the north-east parts of Bengal. Our figure was made from the only plant that has as yet flowered in England, in the gardens of the Honourable C. Greville.

Fragaria Indica

PLATE CCCCLXXX.

VACCINIUM NITIDUM.

Shining-leaved Whortle-berry.

CLASS VIII. ORDER I.

OCTANDRIA MONOGYNIA. Eight Chives. One Pointal.

ESSENTIAL GENERIC CHARACTER.

CALYX superus. Corolla monopetala. Filamenta receptaculo inserta. Bacca quadrilocularis, polysperma.

CUP superior. Blossom of one petal. Threads fixed to the receptacle. A berry with four cells, and many seeds.

See Vol. 1. Pl. XXX. VACCINIUM ARCTOSTAPHYLLUS.

SPECIFIC CHARACTER.

VACCINIUM foliis nitidis, ovatis, acutis, obsolete serratis: floribus umbellatis, terminalibus, pendulis: corollis sub-cylindraceis. Stamina decem: ramis oppositis, alternatis. Caulis pedalis, erectus.

WHORTLE-BERRY with shining leaves, egg-shaped, sharp-pointed, and obscurely sawed. Flowers grow in umbels, terminal and pendulous: blossom nearly cylindrical: chives ten: branches opposite, and alternate. Stem a foot high, and upright.

REFERENCE TO THE PLATE.

1. The blossom spread open.
2. The chives spread.
3. A chive magnified.
4. Empalement, seed-bud, and pointal.

THE Vaccinium nitidum is one of the handsomest species, but not so often to be met with as many of the genus. It is nearly allied in its foliage to the V. crassifolium; for, if leaves of both were detached, and mixt together, they might be easily mistaken. The habits of the plants are, however, very distinct, as is also the shape of the flowers. During the month of May and beginning of June this plant is in the greatest perfection. After that period the flowers lose much of their fine red colour. Our figure was made from a beautiful little shrub, above a foot high, in the nursery of **Messrs. Whitley and Brames.**

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PLATE CCCCLXXXI.

CINCHONA CARIBÆA.

West India Bark-tree.

CLASS V. ORDER II.

PENTANDRIA MONOGYNIA. Five Chives. One Pointal.

GENERIC CHARACTER.

CALYX. Perianthium monophyllum, superum, campanulatum, 5-dentatum, persistens.

COROLLA monopetala, infundibuliformis, 5-partita.

STAMINA. Filamenta 5, minima: antheræ oblongæ, intra faucem corollæ.

PISTILLUM. Germen subrotundum, inferum. Stylus longitudine corollæ. Stigma crassiusculum, oblongum, simplex.

PERICARPIUM. Capsula oblonga, bipartita, calyce coronata, in duas partes dehiscens: partes interiores dehiscentes, dissepimento parallelo.

SEMINA plura, oblonga, compressa, marginata.

EMPALEMENT. Cup one-leafed, above, bell-shaped, five-toothed, and remaining.

BLOSSOM one petal, funnel-shaped, and five-parted.

CHIVES. Threads 5, small: tips oblong, within the mouth of the blossom.

POINTAL. Seed-bud nearly round, beneath. Shaft the length of the corolla. Summit thickish, oblong, and simple.

SEED-VESSEL. Capsule oblong, in two parts, crowned by the cup, the two parts cleaving together; the inner parts gaping, with equal dissepiment.

SEEDS many, oblong, compressed, and emarginated.

SPECIFIC CHARACTER.

CINCHONA foliis alternatis, ovatis, acuminatis, integerrimis, glabris, venosis: inter folia stipula parva, cauli adpressa: floribus axillaribus, simplicibus, albicantibus, glabris, odoratissimis. Rami alternati, oppositi.

Habitat in Caribæis: succedaneum cortici Peruviano.

CINCHONA with alternate leaves, sharp-pointed, entire, smooth, and veined: between the leaves there is a small stipula pressed to the stem: flowers axillary, and single, of a whitish colour, smooth, and very sweet-scented: branches alternate, and opposite.

Native of the Caribæan Islands: as bark, substituted for the Peruvian species.

REFERENCE TO THE PLATE.

1. A flower spread open.
2. The empalement, seed-bud, and pointal.
3. A capsule.

THIS specimen of the Cinchona Caribæa, or Jesuits Bark of Jamaica, was communicated to the author by A. B. Lambert, esq. who raised it from seed, and with whom it has flowered for the first time in this kingdom. Opinions are various as to the time and means by which the medicinal virtues of the Peruvian bark were first discovered; but as the discovery of most very useful things is generally the effect of chance, Geoffroy's account of it (as given in the Medical Botany of Dr. Woodville) is certainly the most natural, who states it to have been occasioned by some Cinchona trees having been blown into a pool of water, and lying there till the water became so bitter that nobody would drink it, till one of the neighbouring inhabitants being seized with a violent paroxysm of fever, and having no other water, drank of this, and was perfectly cured. He prevailed on some of his friends, who were ill, to make use of the same remedy, and it proved successful. But the use of it was little known till the year 1638, when a signal cure being performed on the Countess del Cinchon, the lady of a Spanish viceroy at Lima, (from whom it derives its generic title) it came into general use, and a large quantity of the bark was by that lady distributed amongst the Jesuits, in whose hands it increased in reputation, and was by them first introduced into Europe. The Caribæan species is said to be an excellent substitute for the Peruvian bark, and therefore a most valuable acquisition to us; as Mr. Lambert, in his description of the genus Cinchona, informs us that well grounded fears are entertained of the Peruvian species being some day lost to us, as, from the extreme decortication they have experienced, they are nearly extinct in those parts where they were formerly most abundant.

Pl. 481

PLATE CCCCLXXXII.

DIANTHUS ALPINUS.

Alpine Pink.

CLASS VI. ORDER II.

DECANDRIA DIGYNIA. Ten Chives. Two Pointals.

GENERIC CHARACTER.

CALYX. Perianthium cylindricum, tubulosum, striatum, persistens: os 5-dentatum, basi squamulis quatuor cinctum, quarum interdum duæ oppositæ, inferiores.

COROLLA. Petala 5. Ungues longitudine calycis, angusti, receptaculo inserti: limbus extus planus, laminis late obtusis, crenatis.

STAMINA. Filamenta decem, subulata, longitudine calycis: antheræ ovales, oblongæ, compressæ, incumbentes.

PISTILLUM. Germen ovale. Styli duo, subulati, staminibus longiores. Stigmata recurvata, acuminata.

PERICARPIUM. Capsula cylindrica, recta, unilocularis, quadrilateralis, apice dehiscens.

SEMINA plurima, compressa, subrotunda, a receptaculo liberata.

EMPALEMENT cylindrical, tubular, lined, remaining: the mouth is 5-toothed, surrounded by four squamæ at the base, or sometimes two opposite ones beneath.

BLOSSOM 5 petals: the claws the length of the calyx, narrow, and inserted into the receptacle: border flat without, broadly obtuse, and notched.

CHIVES. Ten threads, awl-shaped, the length of the calyx: tips oval, oblong, compressed, and incumbent.

POINTAL. Seed-bud oval. Shafts two, awl-shaped, and longer than the chives. Summit recurved, and pointed.

SEED-VESSEL. Capsule cylindrical, straight, one loculament, four-sided, and splitting at the end.

SEEDS many, compressed, nearly round, and freed from the receptacle.

SPECIFIC CHARACTER.

DIANTHUS alpinus. Frutex pygmæus, elegans, foliis oppositis, alternis, linearibus, curvatis, brevibus: floribus terminalibus, rubris, in medio circulo albo.

ALPINE pink. An elegant dwarf shrub, with opposite alternate leaves, linear, curved, and short. Flowers terminal and red, with a small circle of white in the centre.

REFERENCE TO THE PLATE.

1. The empalement.
2. A petal shown from the under side.
3. Seed-bud, chives, and pointals.
4. The chives spread open.
5. Seed-bud and pointals.
6. The seed-bud cut transversely.

THE Dianthus alpinus is a very scarce plant, little known, and rarely to be met with in any collection, although its beauty renders it deserving a place in every one, and its size would never exclude it from any. Our figure represents the entire plant, from the collection of Isaac Swainson, esq. who raised it from seed which he received from Germany. The only coloured representation of it extant is in the Flora Austriaca of Jacquin, from a native specimen, and of no greater magnitude than our figure represents—a diminutive stature, particularly characteristic of the true Alpine pink.

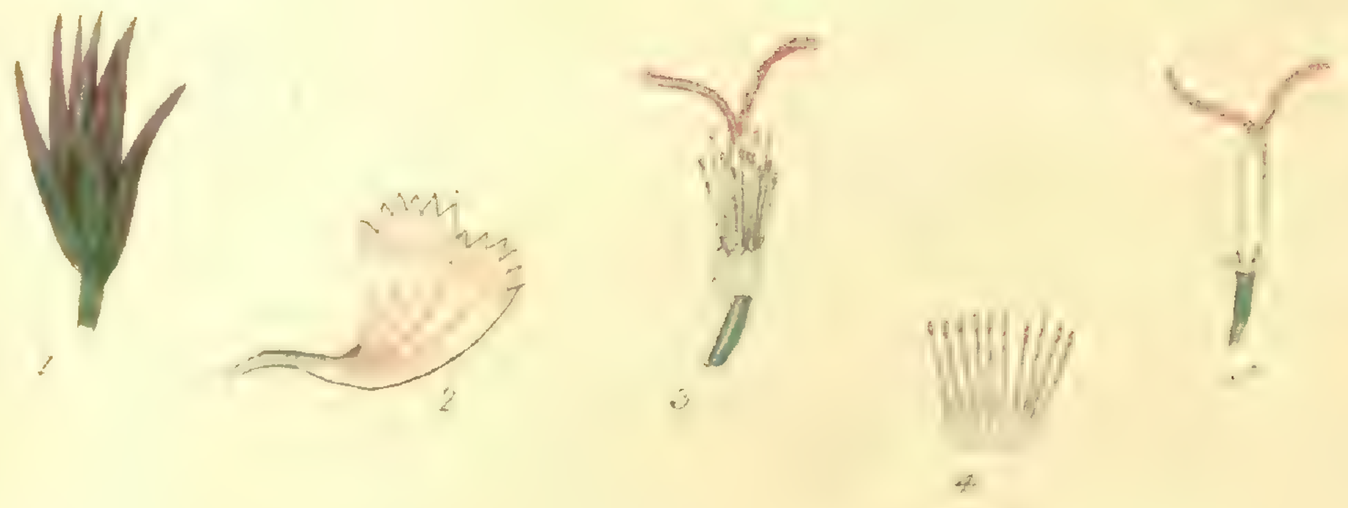
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PLATE CCCCLXXXIII.

DAHLIA PINNATA NANA.

Dwarf Winged-leaved Dahlia.

CLASS XIX. ORDER II.

SYNGENESIA POLYGAMIA SUPERFLUA. Tips united. Superfluous Pointals.

ESSENTIAL GENERIC CHARACTER.

CALYX duplex. Corolla radiata, radiis lacinias calycis numero æquantibus: corollulæ pedicellatæ. Receptaculum paleaceum. Stigmata plumosa.

EMPALEMENT double. Blossom radiated, with the rays equalling in number the segments of the empalement: the florets pedicelled. Receptacle chaffy. Summit plumose.

SPECIFIC CHARACTER.

DAHLIA foliis pinnatis: pinnulis quinque, ovatis, acutis, dentatis: floribus duplicibus: caulis humilis.

DAHLIA with pinnated leaves: the pinnules five, ovate, pointed, and toothed: flowers double: stem low.

REFERENCE TO THE PLATE.

1. One of the radiating florets.
2. A floret of the disk with its scale.
3. A flower spread open.
4. Seed-bud and pointal, summit magnified.

THIS double-flowered dwarf Dahlia is certainly the most attractive of the genus. It is supposed to be only a variety of the D. pinnata, but the variation is almost powerful enough to constitute a species; as, besides the difference in its flowers, we have never found it arrive to more than half the height of the pinnata, although we have seen it every autumn for four years in luxuriant bloom. At present it is a scarce plant, and appears to be not quite so hardy as the taller species, nor so easily increased. Our figure was made from a plant in the collection of the Right Hon. Lady Holland, at Holland House, Kensington.

Pl. 29

Dahlia pinnata varia

PLATE CCCCLXXXIV.

NICOTIANA GLUTINOSA.

Clammy Tobacco.

CLASS V. ORDER I.

PENTANDRIA MONOGYNIA. Five Chives. One Pointal.

GENERIC CHARACTER.

CALYX. Perianthium monophyllum, ovatum, 5-fidum, persistens.

COROLLA monopetala, infundibuliformis: tubus calyce longior: limbus patulus, 5-fidus, 5-plicatus.

STAMINA. Filamenta quinque, subulata, vix longitudine corollæ, adscendentia: antheræ oblongæ.

PISTILLUM. Germen ovatum. Stylus filiformis, longitudine corollæ. Stigma capitatum, emarginatum.

PERICARPIUM. Capsula sub-ovata, lineâ utrinque insculptâ: bilocularis: bivalvis, apice dehiscens: receptaculum dimidiatum, ovatum, punctatum: dissepimentis affixis.

SEMINA numerosa, reniformia, rugosa.

EMPALEMENT. Cup one-leafed, ovate, 5-cleft, and remaining.

BLOSSOM one petal, funnel-shaped: tube longer than the calyx: segments spreading, 5-cleft, 5-plaited.

CHIVES. Threads five, awl-shaped, scarcely the length of the blossom, and ascending: tips oblong.

POINTAL. Seed-bud ovate. Shaft thread-shaped, the length of the blossom. Summit headed, and emarginated.

SEED-VESSEL. Capsule nearly egg-shaped, with a line imprinted on both sides: two loculaments: two valves, splitting at the point: receptacle half-way divided, ovate, and dotted: dissepiments cleaving together.

SEEDS numerous, kidney-shaped, and rough.

SPECIFIC CHARACTER.

NICOTIANA foliis petiolatis, sub-cordatis, glandulis minutis viscosis circumsessis: floribus alternis, solitariis, ad partem superam ramorum: corolla campanulata, pallide purpurea, viscosa: ramis glandulis minutis tectis, viscosis.

Habitat in Peru.

TOBACCO with petiolated and nearly heart-shaped leaves, beset with minute viscous glands: flowers grow solitary and alternate on the upper part of the branches: blossom bell-shaped, of a pale purple, and viscous: the branches covered with glands very small, and clammy.

Native of Peru.

REFERENCE TO THE PLATE.

1. The empalement.
2. The blossom spread.
3. Seed-bud and pointal.

THIS species of Nicotiana is called the Spanish Tobacco; and although we cannot exactly ascertain whether it is cultivated for the purpose of manufacturing into tobacco or snuff, yet there is little doubt of that being the case. The general appearance of this species very much resembles the common Tobacco plant, so well known. The most ostensible difference appears to exist in the glutinous character of the present species, whose stalks, leaves, and flowers are beset by numerous little glands, that emit a viscid juice. There is not much beauty attached to it; but, as a scarce and unfigured species, it well deserves a representation, as would any species of a genus that forms so considerable a branch in the commerce of a mercantile country. Our figure was made from a fine specimen received from A. B. Lambert, esq.

Pl. 254

Datura, glutinosa

PLATE CCCCLXXXV.

MELALEUCA SALICIFOLIA.

Willow-leaved Melaleuca.

CLASS XVIII. ORDER IV.

POLYADELPHIA POLYANDRIA. Threads in many Sets. Many Chives.

ESSENTIAL GENERIC CHARACTER.

Calyx quinquefidus, semisuperus. Petala quinque. Filamenta multa, longissima, in quinque corpora connata. Pistillum unum. Capsula 3-locularis.	Cup five-cleft, half above. Petals five. Threads numerous, very long, united into five bodies. Pointal one. Capsule 3-celled. See Melaleuca Ericæfolia, Pl. 175. Vol. III.

SPECIFIC CHARACTER.

Melaleuca foliis oppositis, lanceolatis, punctatis: floribus paniculatis: corollis luteis, magnis, et patentibus: ramis oppositis, alternatis: caulis erectus.	Melaleuca with opposite lance-shaped leaves, dotted: flowers grow in panicles: blossoms yellow, large, and spreading: branches opposite, and alternate: stem upright.

REFERENCE TO THE PLATE.

1. A flower complete, spread open.
2. The same shown from the outside.
3. One of the bundles of chives.
4. Empalement, seed-bud, and pointal.

Very few species of plants revolt so much in appearance from their original genus as the present one, whose exterior bears very little resemblance to Melaleuca, although, upon examination, it perfectly accords in every particular. It is a native of New Holland, and, we are informed, was first raised from seed by Mr. Barr, nurseryman at Ball's Pond, Islington.

Our figure was made from a plant in fine bloom at the nursery of Messrs Whitley and Brames.

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Senecio, salicifolia

PLATE CCCCLXXXVI.

PÆONIA DAURICA.

Dauric Pœony.

CLASS XIII. ORDER II.

POLYANDRIA DIGYNIA. Many Chives. Two Pointals.

ESSENTIAL GENERIC CHARACTER.

CALYX 5-phyllus. Petala 5. Stylus 0. Capsulæ polyspermæ.

CUP 5-leaved. Petals 5. Pointal none. Capsules many-seeded.

SPECIFIC CHARACTER.

PÆONIA foliis pinnatis: foliolis sub-ovatis, glaucis: floribus rubro-purpureis: caulis herbaceus, bipedalis.

PÆONY with winged leaves: the leaflets are nearly egg-shaped, and glaucous: flowers of a red purple: stem herbaceous, and about two feet high.

REFERENCE TO THE PLATE.

1. The empalement and seed-buds.
2. A chive.
3. The seed-buds as they appear when the seeds are nearly perfect.

THIS fine Pæony is at present a scarce plant; nor is there any figure of it extant, if not in the Flora Russica of Dr. Pallas. The specimen our figure represents was received from Mr. J. Bell, who raised it from seed, and with whom it has flowered for the first time in this country. It may with propriety be ranked among the most attractive of the herbaceous species. The flowers expand in the early part of summer; and from the cold climate whence it is indigenous, little doubt need be entertained of its resisting our winter, if it can but endure the sudden changes of weather to which this island is subject; a transition that frequently proves more fatal to plants the natives of a cold northern clime, than to those of southern origin.

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Paeonia Dauvica

PLATE CCCCLXXXVII.

XERANTHEMUM HERBACEUM.

Herbaceous Eternal Flower.

CLASS XIX. ORDER II.

SYNGENESIA POLYGAMIA SUPERFLUA. Tips united. Superfluous Pointals.

ESSENTIAL GENERIC CHARACTER.

RECEPTACULUM paleaceum, aut nudum. Pappus setaceus. Calyx imbricatus, radiatus, radio colorato.

RECEPTACLE chaffy, or naked. Feather bristly. Empalement tiled, rayed, the ray coloured.

SPECIFIC CHARACTER.

XERANTHEMUM herbaceum: foliis amplexicaulibus, oblongis, margine revolutis, lanâ albâ tectis: floribus terminalibus, solitariis, pallide aurantiis, nitidissimis: squamæ inferæ fulvescentes.

XERANTHEMUM with an herbaceous stem: leaves embracing the stem, oblong, rolled back at the edges, and covered with a white wool: flowers terminate the branches singly, are of a pale gold colour, and very shining: the lower scales are of a foxy tint.

REFERENCE TO THE PLATE.

1. One of the radiating scales.
2. A floret of the disk.
3. The chives and pointal.
4. Leaf of a variety.

THIS handsome species of Xeranthemum may be regarded as truly herbaceous, as the plant not only dies down annually, but even whilst living keeps constantly sending up fresh shoots from the root. The white appearance of the leaves is owing to their being enveloped by a kind of wool: but there are two varieties; the one whose foliage is almost without this woolly coat, and the other entirely divested of it, and of a rich green colour; but in every other particular the plants are all exactly alike.

Our figure was made from a small plant in fine flower in the conservatory of G. Hibbert, esq.

Pl. 187

Leucanthemum, hortanum

PLATE CCCCLXXXVIII.

BROUSSONETIA PAPYRIFERA.

Paper Mulberry.

CLASS XXII. ORDER IV.

DIŒCIA TETRANDRIA. Chives and Pointals on different Plants. Four Chives.

GENERIC CHARACTER.

* *Masculi flores.*

AMENTUM cylindraceum.
CALYX 4-partitus. Corolla nulla.

* *Feminei flores.*

AMENTUM globosum, floribus undique tectum.
CALYX inferus, persistens, 3- seu 4-dentatus. Corolla nulla. Stylus filiformis. Fructus cylindraceo-clavatus, apice bilabiatus.

SEMEN nudum ad apicem fructûs.

* *Male flowers.*

CATKIN cylindrical.
EMPALEMENT 4-divided. Blossom none.

* *Female flowers.*

CATKIN globular, covered all over by flowers.
EMPALEMENT beneath and remaining, 3- sometimes 4-toothed. Blossom none. Shaft thread-shaped. Fruit cylindrically club-shaped, and two-lipped at the point.
SEED naked at the point of the fruit.

Broussonetia papyrifera. Vent. Tab. Veg. et Willd. Sp. Pl.

SPECIFIC CHARACTER.

BROUSSONETIA foliis tri- vel quinque-lobis, acutis, serratis, supra scabris, subtus pubescentibus.

BROUSSONETIA with leaves from 3- to 5-lobed, pointed, sawed, rough on the upper surface, and softly haired beneath.

REFERENCE TO THE PLATE.

Male Plant.

1. An empalement and chives, in an infant state.
2. The same magnified.
3. An empalement and chives in perfection.
4. The same magnified.

Female Plant.

1. The catkin with a pointal detached.
2. A section of the same when in fruit.
3. One of the florets with the seed detached.
4. A seed cut in two, and magnified.

THIS useful plant is the Morus papyrifera of Linnæus, but certainly would not have been so called by him, had both the male and female plant come under his inspection, as it does not belong either to the class or order of the Mulberry. Neither of the plants, when in bloom, possesses much beauty, but they have rather a sombre aspect: yet the female plant, when in fruit, is certainly very handsome. In Japan and the South Sea Islands, where it is indigenous, the bark of it serves to make a clothing for the natives. In Japan, it not only makes cloth for them, but all the Japanese paper is made from the bark of it. There are four sorts. The first is a royal size, of a square form, very smooth, and painted on one side. The second is a fine letter paper, in sheets often three feet long. The third is used for covering their best varnished articles, and so fine as sometimes to look like a spider's web. The fourth is a common writing-paper, varying in size and form. The process of its manufacture is by cutting off the shoots after the leaves fall, and boiling them till the bark separates. It is then peeled off, and steeped 3 or 4 hours in water, to purify, and the black outer cuticle, and green matter within, are scraped off and separated, according to their qualities. It is again boiled with a little ashes, and stirred with a bamboo stick; and the boiling is complete when its downy fibres can be separated with a touch of the finger. It is then agitated in water till it appears like a lump of tow, and again beat with camphor wood battens, and strained, for the coarser paper. An infusion of the roots of the Hibiscus manihot, or the leaves of Rivaria Japonica, with the flour of Japan rice, is then mixed with it, and poured on their moulds; which are not, like ours, formed of wire, but of fine rushes, and the sheets laid on a matted table with a fine shred of bamboo between each, and covered by a board with a stone upon it, to squeeze out the water, dried the next day singly on flat boards, and then packed up for sale.

Our figure was made from fine plants in the garden of J. Vere, esq.

Cephalanthus occidentalis.

PLATE CCCCLXXXIX.

GNAPHALIUM GRANDIFLORUM.

Large-flowered Gnaphalium.

CLASS XIX. ORDER II.

SYNGENESIA POLYGAMIA SUPERFLUA. Tips united. Superfluous Polygamy.

ESSENTIAL GENERIC CHARACTER.

RECEPTACULUM nudum. Pappus pilosus, vel plumosus. Calyx imbricatus, radiatus, radio colorato.

RECEPTACLE naked. Down hairy, or feathery. Empalement imbricated, rayed, with the ray coloured.

SPECIFIC CHARACTER.

GNAPHALIUM grandiflorum : floribus paniculatis, albis, lucidis : pedunculis albis, lanatis : foliis ovato-acutis, albâ lanâ tectis.

GNAPHALIUM with large flowers : flowers grow in panicles, white, and shining : footstalks white, and woolly : leaves are ovate-pointed, and covered with a white wool.

REFERENCE TO THE PLATE.

1. A scale of the empalement..
2. The same shown from the under side.
3. A flower complete.
4. The same magnified.
5. The seed-bud, chives, and pointal magnified.
6. Seed-bud and pointal.
7. The same magnified.

THIS Gnaphalium is at present the largest flowering species (the G. eximium excepted). Its flowers are equally durable with those of any Xeranthemum, nor does it vary essentially in any particular from that genus (as a section of which it would have been much better understood). The genus Elychrisum we find, upon examination, to be built upon the same equivocal ground, and there is little doubt but at some future period those two superfluous genera will fall into the old Linnæan genus of Xeranthemum. Our figure was made from a fine plant in the Clapham collection, about a foot and a half high. We have seen it grow much taller, but it is not then so handsome. It is certainly not a new plant, but has not been as yet figured in any modern publication. The whiteness so prevalent in its flowers and leaves (by way of contrast to the green foliage of most other plants) would render it deserving a place in every collection, even if its long-lived shining flowers were not a sufficient recommendation.

Pl 455.

PLATE CCCCXC.

PONTEDERIA DILATATA.

Dilated Pontederia.

CLASS VI. ORDER I.

HEXANDRIA MONOGYNIA. Six Chives. One Pointal.

GENERIC CHARACTER.

CALYX. Spatha communis, oblonga, latere dehiscens.
COROLLA monopetala, 6-fida.
STAMINA. Filamenta sex, corollæ inserta. Antheræ oblongæ.
PISTILLUM. Germen oblongum, inferum. Stylus simplex.
PERICARPIUM. Capsula trilocularis, triangularis.
SEMINA plurima.
OBS. In quibusdam speciebus germen est superum: in aliis inferum.

EMPALEMENT. Spathe common, oblong, opening sideways.
BLOSSOM one-petalled, 6-cleft.
CHIVES. Threads six, inserted into the blossom. Tips oblong.
POINTAL. Seed-bud oblong, beneath. Shaft simple.
SEED-VESSEL. Capsule three-locular, three-angled.
SEEDS many.
OBS. In some species the seed-bud is above, in others beneath.

SPECIFIC CHARACTER.

PONTEDERIA germine supero: foliis sagittatis, obtusis, vel acutis: floribus umbellatis, confertis, cæruleis.
Habitat in India Orientali.

PONTEDERIA with the seed-buds above: leaves arrow-shaped, obtuse, or pointed: flowers in crowded umbels, of a blue colour.
Native of the East Indies.

REFERENCE TO THE PLATE.

1. A blossom spread open.
2. Seed-bud and pointal, summit magnified.
3. The plant in miniature.

THIS handsome aquatic is a native of the East Indies, and figured in Col. Syms's Embassy to the Kingdom of Ava, under the title of Pontederia dilatata. On examining some plants in the hot-house of J. Vere, esq. (whence our figure was taken) we observed so much variation in them, that we are inclined to think the P. hastata of Dr. Roxburgh's Coromandel Plants represents (from a weak plant) the same species our figure delineates.

deáena. dilatata

PLATE CCCCXCI.

GARDENIA RADICANS.

Rooting Gardenia.

CLASS V. ORDER I.

PENTANDRIA MONOGYNIA. Five Chives. One Pointal.

ESSENTIAL GENERIC CHARACTER.

CALYX 1-phyllus, 5-fidus, persistens.
COROLLA contorta, monopetala, 5-partita.
STAMINA. Filamenta nulla. Antheræ quinque. Bacca infera, 2-locularis, polysperma. Stylus elevatus, bilobus.

EMPALEMENT 1-leafed, 5-parted, and remaining.
BLOSSOM twisted, one-leafed, 5-parted.
CHIVES. Threads none. Tips 5. Berry beneath, 2 loculaments, many-seeded. Shaft above, 2-lobed.

SPECIFIC CHARACTER.

GARDENIA foliis lanceolatis: corollis hypocrateriformibus, albis, odoratissimis: calyce angulato: caule radicante.

GARDENIA with lance-shaped leaves: blossom pitcher-shaped, white, and very sweet-scented: cup angular: stem rooting.

REFERENCE TO THE PLATE.

1. The empalement.
2. The blossom spread open.
3. Seed-bud and pointal.

THE Gardenia radicans is a native of Japan, and is figured by Thunberg in his Botanical Dissertation. The figure is small and coarse, but yet characteristic. We have represented a fine young plant, as its fragrant flowers are then much better relieved by the surrounding leaves. It is at present cultivated in the hot-house; but we are inclined to think it might succeed in the protection of the green-house. The luxuriance of its petals frequently absorbs nearly all the parts of fructification. But our specimen fortunately afforded three antheræ out of the five, and the pointal entire.

Our figure was made from a plant in the nursery of Messrs. Whitley and Brames.

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Gardenia radicans

PLATE CCCCXCII.

OXYLOBIUM CORDIFOLIUM.

Heart-leaved Oxylobium.

CLASS X. ORDER I.

DECANDRIA MONOGYNIA. Ten Chives. One Pointal.

GENERIC CHARACTER.

CALYX simplex, quinquepartitus.
COROLLA papilionacea.
STYLUS subulatus. Stigma obtusum.
LEGUMEN ovato-acuminatum, apice compressum, polyspermum.

EMPALEMENT simple, five-parted.
BLOSSOM butterfly-shaped.
SHAFT awl-shaped. Summit blunt.
POD pointedly egg-shaped, compressed at the end, and many-seeded.

REFERENCE TO THE PLATE.

1. A leaf magnified.
2. The empalement.
3. The standard.
4. A back view of the same.
5. One of the wings.
6. The keel.
7. The chives.
8. The same spread open, one tip magnified.
9. Seed-bud and pointal, summit magnified.
10. A ripe seed-vessel.
11. The same spread open.

PLANTS of a Papilionaceous character furnish the most frequent opportunity for generic divisions. Nine Genera have already been made by Dr. Smith and others to contain the Butterfly flowers of New Holland. Our little novelty agrees with neither. From Pultenæa, Aotus, Mirbelia, and Dillwynia, it differs in the pod not being two-seeded. The two last genera have also the cups two-lipped, and the first with appendages attached to it. Gompholobium has a globular pod, and Chorizema an oblong one and a bilabiate calyx. Daviesia, Viminaria, and Sphærolobium have pods one-seeded. Thus situated, we are under the necessity of adding one more to the number of genera, perhaps already too much extended. We have never seen it exceed a foot in height. The foliage is mostly in whorls: and the stem, leaves, cups, and fruits are hairy.

Our figure represents one of the plants from the nursery of Messrs. Loddige, who first raised it from seed, and where we observed its brilliant little flowers in successive bloom for at least six months.

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…lóbium cordifólium

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442	Protea pulchella, *Var. speciosa*	Waved-leaved Protea, *Specious Variety*	G. H.	Shrub.	April.
443	Erythrina speciosa	Showy Erythrina	H. H.	Shrub.	April.
444	Lobelia hirsuta	Hairy Lobelia	G. H.	Shrub.	March.
445	Epidendrum lineare	Linear-leaved Epidendrum	H. H.	Shrub.	July.
446	Dolichos hirsutus	Hairy-stemmed Dolichos	H. H.	Shrub.	August.
447	Protea argentiflora	Silvery-flowered Protea	G. H.	Shrub.	August.
448	Pæonia suffruticosa, *Var. flore purpureo*	Shrubby Pæonia, *Purple-flowered Variety*	G. H.	Shrub.	April.
449	Linum trigynum	Three-styled Golden Flax	G. H.	Shrub.	April.
450	Albuca fastigiata	Level-topped Albuca	G. H.	Bulb.	July.
451	Diosma ericæfolia	Heath-leaved Diosma	G. H.	Shrub.	All the Year.
452	Achania mollis	Soft-haired-leaved Achania	H. H.	Shrub.	July.
453	Protea repens	Creeping Protea	G. H.	Shrub.	June.
454	Urtica baccifera	Berry-bearing Nettle	H. H.	Shrub.	June.
455	Polygala mixta	Mixt Polygala	G. H.	Shrub.	All the Year.
456	Lachenalia flava	Yellow-flowered Lachenalia	G. H.	Bulb.	June.
457	Banksia spinulosa	Thorny-leaved Banksia	G. H.	Shrub.	All Summer.
458	Eugenia malaccensis	Malay Apple-tree	H. H.	Tree.	July.
459	Lasiopetalum ferrugineum	Oak-leaved Lasiopetalum	G. H.	Shrub.	June.
460	Lachenalia sessiliflora	Sessile-flowered Lachenalia	G. H.	Bulb.	July.
461	Protea teretifolia	Cylindric-leaved Protea	G. H.	Shrub.	June.
462	Malus Japonica	Scarlet-flowering Japan Apple	Har.	Shrub.	June.
463	Pæonia papavaracea	Poppy-like Pæony	G. H.	Shrub.	July.
464	Diosma ovata	Oval-leaved Diosma	G. H.	Shrub.	May.
465	Protea divaricata	Straddling-leaved Protea	G. H.	Shrub.	July.
466	Goodenia tenella	Slender Goodenia	G. H.	Shrub.	June.
467	Lythrum fruticosum	Shrubby Lythrum	G. H.	Shrub.	All Summer
468	Aloe arborescens	Tree Aloe	H. H.	Shrub.	June.
469	Protea coronata	Crown-flowered Protea	G. H.	Shrub.	July.
470	Ophrys arachnoides	Spider-like Ophrys	G. H.	Shrub.	July.
471	Ophrys myodes	Fly-like Ophrys	G. H.	Shrub.	July.
472	Hibbertia crenata	Scolloped-leaved Hibbertia	G. H.	Shrub.	July.
473	Yucca gloriosa	Superb Yucca	Har.	Shrub.	July.
474	Psoralea pinnata	Winged-leaved Psoralea	G. H.	Shrub.	July.
475	Serapias cordigera	Heart-bearing Serapias	H. H.	Shrub.	June.
476	Melaleuca diosmæfolia	Diosma-leaved Melaleuca	G. H.	Shrub.	July.
477	Linum venustum	Graceful Linum	Har.	Shrub.	July.
478	Crinum latifolium	Broad-leaved Crinum	H. H.	Bulb.	August.
479	Fragaria indica	Indian Strawberry	Har.	Herb.	July
480	Vaccinium nitidum	Shining-leaved Whortle-berry	Har.	Shrub.	June.
481	Cinchona caribæa	West India Bark-tree	H. H.	Shrub.	August.
482	Dianthus alpinus	Alpine Pink	G. H.	Shrub.	July.
483	Dahlia pinnata nana	Dwarf winged-leaved Dahlia	G. H.	Herb.	September.
484	Nicotiana glutinosa	Clammy Tobacco	G. H.	Herb.	August.
485	Melaleuca salicifolia	Willow-leaved Melaleuca	G. H.	Shrub.	July.
486	Pæonia Daurica	Dauric Pæony	Har.	Herb.	June.
487	Xeranthemum herbaceum	Herbaceous Eternal Flower	G. H.	Herb.	All Summer.
488	Broussonetia papyrifera	Paper Mulberry	Har.	Shrub.	June.
489	Gnaphalium grandiflorum	Large-flowered Gnaphalium	G. H.	Shrub.	August.
490	Pontederia dilatata	Dilated Pontederia	H. H.	Aquatic.	September.
491	Gardenia radicans	Rooting Gardenia	H. H.	Shrub.	August.
492	Oxylobium cordifolium	Heart-leaved Oxylobium	G. H.	Shrub.	July.

ERRATA.

Plate 438 read 433.
467 instead of Lythrum of Linnæus, read Lythrum *fruticosum* of Linnæus.
468 line 4 from the bottom, instead of *height* read *size*.